

UNITED STATES OF AMERICA  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

**Clerk's File Copy**

**FILED**  
OCT 30 1984  
U. S. DISTRICT COURT  
Northern District of Illinois

IN THE UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION

BALLY MANUFACTURING CORPORATION,  
a Delaware corporation,

Plaintiff/Counterdefendant,

vs.

D. GOTTLIEB & CO., a corporation,  
WILLIAMS ELECTRONICS, INC., a  
corporation, and ROCKWELL INTERNATIONAL  
CORPORATION,

Defendants/Counterplaintiffs.

Docket No.  
78 C 2246

Chicago, Illinois  
March 29, 1984  
2:15 p.m.

VOLUME XXI-B

**TRANSCRIPT OF PROCEEDINGS**

Before

HON. JOHN F. GRADY

Judge

**DOCKETED**  
NOV 08 1984

LAURA M. BRENNAN  
OFFICIAL COURT REPORTER  
U. S. DISTRICT COURT  
UNITED STATES COURT HOUSE  
ROOM 1818  
CHICAGO, ILLINOIS 60604  
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1 BALLY MANUFACTURING CORPORATION,  
2 a Delaware corporation,

3 Plaintiff/Counterdefendant,

4 vs.

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9 VOLUME XXI-A  
10 TRANSCRIPT OF PROCEEDINGS  
11 BEFORE THE HONORABLE JOHN F. GRADY

11 TRANSCRIPT ORDERED: MR. JEROLD B. SCHNAYER  
12 MR. MELVIN M. GOLDENBERG

13 APPEARANCES:

14 For the Plaintiff/  
15 Counterdefendant:

MR. KATZ  
MR. SCHNAYER  
MR. TONE  
MS. SIGEL

17  
18 For the Defendants/  
19 Counterplaintiffs:

MR. LYNCH  
MR. HARDING  
MR. GOLDENBERG  
MR. RIFKIN  
MR. ELLIOTT  
MR. GOTTLIEB

22  
23 Court Reporter:

LAURA M. BRENNAN  
219 South Dearborn Street, Room 1918  
Chicago, Illinois 60604



1  
2 THE CLERK: 78 C 2246, Bally v. Gottlieb, case on  
3 trial.

4 MR. TONE: Good morning, your Honor.

5 MR. GOLDENBERG: Good morning, Judge.

6 MR. LYNCH: Good morning, your Honor.

7 THE COURT: Good morning, counsel.

8 MR. GOLDENBERG: First, Judge there's a preliminary  
9 matter.

10 I've been advised that we have the consent of  
11 the plaintiff to provide to the Court a counterdesignation of  
12 the depositions of Mr. Steven Mayer and Larry Emmons, both  
13 Atari employees.

14 MR. TONE: No objection, your Honor.

15 THE COURT: All right.

16 MR. GOLDENBERG: And these have been marked and  
17 offered as trial Exhibits 5-JJJ and 5-LLL.

18 THE COURT: All right, those are received.

19 (Said exhibits were received into evidence as trial  
20 Exhibits 5-JJJ and 5-LLL.)

21 MR. GOLDENBERG: Thank you. I'll hold them for  
22 the moment.

23 MR. KATZ: Your Honor, the plaintiffs would like  
24 to file a trial memorandum regarding the level of ordinary  
25 skill in the relevant art that your Honor had requested.

THE COURT: All right.

1 MR. KATZ: We received the defendants' yesterday.

2 THE COURT: Yes.

3 MR. KATZ: It's very short, but it has some cases  
4 attached to it. A lot of them are recent slip opinions from  
5 the CAFC.

6 And we also have another short memorandum re-  
7 garding the presumption of validity as stated in the recent  
8 cases from the CAFC, which we're serving on the defendants.  
9 The cases are attached to it.

10 THE COURT: All right.

1 THE COURT: Mr. Goldenberg.

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2 MR. GOLDENBERG: Your Honor, at this time defendants  
3 jointly move for a dismissal of this case under the provisions  
4 of Rule 41-B on the ground that the plaintiffs have failed,  
5 plaintiff has failed to state a cause of action against it.  
6 Specifically we will be relying on five reasons as to why  
7 this motion should be granted. And to provide a guidepost  
8 for ourselves as the morning proceeds and for the Court, we  
9 have written it out on this chart.

10 At this time I intend to make a kind of  
11 introductory statement, and Mr. Lynch will then pick up the  
12 argument, with the Court's permission.

13 THE COURT: Yes.

14 MR. GOLDENBERG: The first ground is that we be-  
15 lieve that the evidence in this case establishes clearly and  
16 convincingly, we understand the standard, that the patents  
17 in suit are invalid as obvious under Section 103 of the patent  
18 statute.

19 Yesterday, the Court in this connection asked  
20 us to consider as to whether there was some legal basis for  
21 holding a patent claim invalid, perhaps lying somewhere in be-  
22 tween Section 103, the obvious section, and Section 102, the  
23 anticipation section.

24 As we have thought of that, what we would like  
25 to say to the Court is that in order to find a patent invalid

1 under 103, it is not necessary that the prior art be in a  
2 number of different patents. The Court does have the right,  
3 if it chooses, to look at a single item of prior art and say  
4 that the differences between that single item of prior art,  
5 a patent or a publication, are those which would have been  
6 obvious to the ordinary man skilled in the art at the time the  
7 invention was made. And I don't know that this is responsive  
8 to the question that the Court had, but we thought perhaps it  
9 might be. And as this morning proceeds, I think you will see  
10 that that is not only possible in this case, but we believe  
11 should be done, although we do rely on a number of items of  
12 prior art, there is, as you can imagine, some more items of  
13 prior art which come so close to anticipating that the differ-  
14 ences truly would have been obvious to the ordinary man  
15 skilled in the art.

16 However, we would say in the treatment of  
17 that, we believe that the invalidity holding would have to  
18 be bottomed on Section 103, an obvious.

19 So, that is our first ground and we recognize  
20 that we carry a burden in that respect, and we believe, how-  
21 ever, we will be able to do it, that the record more than  
22 does that for us.

23 Our second ground -- well, let me back up  
24 there if I may.

25 And I spoke of the presumption of validity and

1 our burden. We do tell the Court that there is a presumption  
2 of validity here and, however, that presumption only goes to  
3 the events -- let me withdraw that. I want to put it care-  
4 fully.

5 In this case, as the Court is aware, there  
6 were a number of events that we have had reference to which  
7 are subsequent to a reduction to practice in September of  
8 1974 relied upon by the plaintiff and asserted to the Patent  
9 Office, found by the Patent Office, and in substantial part,  
10 providing a basis for the allowance of the re-issue applica-  
11 tion.

1 We do tell the Court, however, that to the  
2 extent that the plaintiff is attempting in this proceeding to  
3 prove that September date, the burden is upon them to do so,  
4 and they must prove that September date by evidence which is  
5 clear and convincing.

6 The cases are quite clear on that in both the  
7 District Courts and the Circuit Courts.

8 The plaintiff was able to carry that burden in  
9 the Patent Office by filing a so-called Rule 131 affidavit.  
10 However, in an infringement proceeding when a plaintiff  
11 attempts to prove a date of invention earlier than its filing  
12 date, it then picks up a burden, a heavy burden, characterized  
13 by the Court -- by the Courts-- to prove that date.

14 And in connection with that, evidence must be  
15 offered in support of that proposition which is other than the  
16 testimony of the inventors themselves. The inventors must be  
17 corroborated by other evidence.

18 That other evidence may be the evidence of  
19 witnesses, it may be contemporaneous documents. But there is  
20 nevertheless a burden on them, and that burden does exist in  
21 this case.

22 And we shall be addressing ourselves to that.  
23 Our second ground for believing that judgment  
24 should be entered against the plaintiff is that the claims are  
25 invalid for failure to comply with the provisions of 35 U.S.C.

1 Section 112. And we urge two bases there.

2 The first, that the invention, whatever it may  
3 be -- and indeed we submit that whatever the invention is has  
4 been defined in the course of this trial any number of  
5 different ways by the plaintiff; so that we hardly know what  
6 it is -- has not been distinctly claimed.

7 And Section 112, it has been held, is in the  
8 statute really to avoid, I think, what we have seen here in  
9 this proceeding, namely, to permit a member of the public to  
10 determine whether or not he infringes. If the claim is such  
11 that that cannot be done, then it is invalid.

12 And so it is not a formality. It is not a  
13 procedural kind of thing. It's a matter of substance. And  
14 that is the second paragraph of Section 112.

15 Our second ground is that the invention, again  
16 whatever it may be, is not described in the patent.

17 I think it clear that the plaintiff has taken  
18 the position that the invention is some kind of mystical,  
19 uncertain combination of hardware and software that permits a  
20 microprocessor to be used in a pinball game using matrixing  
21 and multiplexing.

22 That is not described anywhere in this patent.  
23 To the extent that the plaintiff has recourse  
24 to this program listing, its flaws, its deficiencies are  
25 numerous. It is inoperative. It is incomplete, and it is

not a part of the specification.

Contrary to what Professor Kayton says, merely putting something in an envelope with a patent application which is sworn to and forwarding it to the Patent Office does not make it part of the specification. And we will be citing what we believe to be ample authority to you in support of that proposition.

Next, we come to another reason as to why the defendants are entitled to judgment, and that is, the plaintiff has not proven infringement by a preponderance of the evidence, as is their burden. That is their burden.

All they have done, all they have done is to prove that there is an identity of result. That is to say, the accused devices are pinball games, microprocessor-controlled, and achieve -- and are practical pinball games. That's all they've proven.

To prove infringement requires more than that. It requires that the plaintiff prove that there be a substantial identity of means, function and result.



Those first two elements are simply not in the plaintiff's case. And we believe we are entitled to judgment on that ground.

Our fourth reason is that the patent is unenforceable. We urge this to you on the basis of the evidence in this case; that it seems to us that in presenting evidence to the Patent Office in the course of the original application for the original patent, and in the course of the reissue process proceedings, the plaintiff has exhibited really an extraordinary gross carelessness, an unconcern about ascertaining what the facts were. And here we have reference in substantial part to the Flicker game itself.

Numerous assertions were made to this Patent Office, and indeed to this Court, about what that game was, in what form it existed in September of 1974.

Without a doubt, this record clearly establishes that none of the plaintiff's assertions, either to this Court or to the Patent Office, are true. There were alterations in the game; its functional capability was overstated. And what form the game was in in September of 1974, this record doesn't know. The inventor doesn't remember. He doesn't remember when changes were made. He doesn't remember when changes were made in the computer program. He doesn't remember when semiconductor chips bearing dates after September of 1974 were put into the machine.

1 We tie that in, of course, with this burden  
2 we say exists on the plaintiff to prove that date. They have  
3 not succeeded. But we say they have gone beyond that; that  
4 at various times in this Court and in the Patent Office,  
5 representations have been made about the state of affairs on  
6 that date, which we believe under any reasonable investiga-  
7 tion, and it didn't take us that much trouble to find out,  
8 all we needed was the help of the Court to get access to the  
9 machine, to find out that what was being said about it, what  
10 was being said about its condition, was simply not true.

11 So, we will be addressing ourself to that.

12 Finally, we think that with respect to  
13 Rockwell, named as a defendant in this case, an order of  
14 dismissal should be really granted at this time. Plaintiff  
15 has offered absolutely no proof that Rockwell has in any way  
16 induced or contributed to whatever infringement Gottlieb may  
17 be charged with.

18 We say in the first instance that Gottlieb  
19 does not infringe, and plaintiff has not proven that to be  
20 the case.

21 But beyond that, beyond that, the Court has  
22 heard not a scintilla of evidence that anything sold by  
23 Rockwell to Gottlieb, anything said by Rockwell to Gottlieb  
24 induced or contributed to whatever infringement existed.  
25 Not a word has been said to this Court that such things

1 sold, such things supplied were not standared commercial  
2 items available to all. And so without more, Rockwell really  
3 should be dismissed from the case.

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1 In further connection with that, an accusation  
2 was made with respect to an apparatus sold by Rockwell to  
3 Brunswick. The Court has heard no evidence about Brunswick.  
4 And whatever it was they sold.

5 So, those are the matters we shall be address-  
6 ing ourselves to. Mr. Lynch would now come forward, with  
7 the Court's leave, and get more specific and give us our  
8 facts and our authorities.

9 THE COURT: All right, thank you, Mr. Goldenberg.

10 MR. LYNCH: May it please the Court, your Honor.

11 THE COURT: Mr. Lynch.

12 MR. LYNCH: If I might start out by pointing out to  
13 the Court that although this is a motion at the close of the  
14 plaintiff's case, that the law does not require the Court at  
15 this point to indulge in activity where it looks at the evi-  
16 dence in the light most favorable to the plaintiff.

17 THE COURT: I understand that.

18 MR. LYNCH: Passing that then, your Honor, I will  
19 get to the matters raised by Mr. Goldenberg, principally,  
20 the invalidity of the claims on grounds of unobviousness, or  
21 obviousness.

22 Now, the issue, the principal issue in this  
23 case throughout the case has been precisely what does this  
24 patent mean.

25 A patent is supposed to be a teaching document.

1 The law indicates that a patent, much like a deed, is intended  
2 to set forth the metes and bounds of the property that the  
3 plaintiff or the patentee claims to be his. And that by  
4 following the borderline outlined in that document, by follow-  
5 ing it from signpost to signpost in the claims, we circum-  
6 scribe an area of technology, and that area of technology is  
7 the area on which the limited grant of the sovereign is  
8 focused.

9           When the patent becomes an elastic mass that  
10 can be spread over an entire technology and spread by parol  
11 evidence over an entire technology, that basic quality that is  
12 supposed to exist in a patent is gone. And in this case, I  
13 believe the Court has seen an extensive amount of parol  
14 evidence, a term not normally found in patent law, we don't  
15 talk about parol evidence modifying a patent, but here that's  
16 what has occurred. Indeed, it's been done under the guise  
17 that someone skilled in the art must read the patent and inter-  
18 pret it.

19           I will point out to the Court initially that  
20 we have had interpretations of this patent from two gentlemen  
21 in particular, Dr. Schoeffler and Dr. Kayton. Dr. Schoeffler  
22 said he looked at the patent and interpreted it for the Court  
23 technologically.

24           Dr. Kayton then said that Dr. Schoeffler could  
25 not validly do that unless he had read the entire file history  
of the patent, something that Dr. Schoeffler had not done.

1 In the testimony that became involved in this case,  
2 the Court continually was referred to Claim 45. And Claim 45  
3 was said to include, under guise of one type or another, items  
4 such as self-cleaning digits and the entire laundry list of  
5 material that gave noise prevention and noise immunity.

6 Those words, there is no evidence appear in  
7 the patent or appear in the file history. Many of them.

8 Where do they appear? They appear at certain  
9 places. They appear in the claims.

10 In the instances of cold lamp current limiting  
11 factor, there's a low Beta transistor, it appears in a claim.

12 In instances -- I believe that's the only one  
13 mentioned there.

14 The optoisolator is mentioned in the claim.  
15 The idea of using two decoders for a solenoid is mentioned  
16 in Claim 40.

17 Indeed, this Court, other courts in this  
18 district, and the Court of Appeals has indicated that claim  
19 differentiation is one of the ways that we can look at this  
20 document and see what it means.

21 And it is impermissible to read things in,  
22 to make it so elastic that the borderlines, the metes and  
23 bounds of this claim, can be stretched by the testimony of  
24 individuals alone.

25 Your Honor, Mr. Frederiksen testified, for

1 example, that his invention did not involve multiple matrices.  
2 Mr. Frederiksen testified that Claim 45 was broader than his  
3 invention. All of these things were involved.

4 But I think that the most significant evidence,  
5 your Honor, about how this claim has been treated as elastic  
6 occurred in the examination of Professor Kayton.

7 At document 443, one of the documents in the  
8 Patent Office, the plaintiff argued that they were going to  
9 put to rest once and for all protesters' repeated erroneous  
10 contentions that the reissue applicant's conception did not  
11 contain all of the elements of the claimed invention, and to  
12 do that applicants submitted Appendix B.

13 They said Appendix B clearly shows all of  
14 the elements of the claimed invention as defined by Claim  
15 45, for an example, and contains correlated references to  
16 the evidence in the record establishing the conception.

17 Now, the law quite clearly is, if there is a  
18 conception of all the elements, then we must be able to see  
19 in this evidence the various elements of real time response,  
20 of noise prevention and noise immunity, of error recovery  
21 for a stuck switch -- at least conceived of and appreciated  
22 at that time.

23 The evidence doesn't so indicate, your Honor.  
24 And this is the type of evidence that was  
25 forthcoming throughout the reissue proceedings.



1 And indeed, when we arrive on the scene in  
2 this court, now items like self-cleaning digits, self-cleaning  
3 lamps -- never before mentioned -- items such as no scan  
4 during solenoid closure, something that doesn't even occur on  
5 the Flicker machine, if your Honor will recall, but only  
6 occurs on the two other machines -- all of a sudden these  
7 become aspects of the plaintiff's invention.

8 This is an infringement summary, your Honor.  
9 This tells you why the claims supposedly cover in this in-  
10 stance the Williams' Black Knight invention.

11 But conception, conception requires a complete  
12 mental picture of all the aspects of the invention.



Now, what did the applicant require -- deem at that point as being all of these aspects of the invention.

Essentially, if your Honor will recall, in the booklet that was prepared -- because all of the documents are elsewhere in the patent file -- what we find are copies of the two sketches that Mr. Frederiksen placed on the blackboard in December of 1973 and reconstructed some five or six years later. We find that. That's the first item.

Nothing about software. Not a mention of error recovery for a stuck switch. No mention of any of these items. No mention of real time response.

Mention of what? Multiplexing, perhaps, in a matrix. Yes, perhaps, but that's all. No more. None of the other items.

As we proceed through, we find an affidavit of Mr. Frederiksen, similarly devoid of any such reference.

When we continue through even further, we find a further affidavit of Mr. Nutting. Does not mention any of these items.

As we go even further, we have the affidavit of Mr. Paul Smith, whose testimony involves a conversation with Jeffrey Frederiksen in December '73 where he recalls the sketch being placed on the board. And Mr. Smith provided his recollection of that sketch.

But no testimony about these elements that

1 are supposedly vital to the invention. No discussion of  
2 software.

3 Declaration of Mr. Winter: To the same effect.  
4 No mention of these items. No mention of error recovery for  
5 a stuck switch.

6 What was the invention?

7 Now, recall, your Honor, this was an accumula-  
8 tion submitted by plaintiff on grounds that these supported  
9 all of the elements of claim 45.

10 If one looks at claim 45, your Honor, one  
11 sees why this was accepted by the office: Because Claim 45  
12 says nothing more than: I need to have a programmer, I need  
13 to have a memory means, I'm going to have lamps, switches, and  
14 solenoids, and I am going to multiplex them cyclically and  
15 sequentially.

16 One way to do that is in a matrix. Claim 46  
17 specifically says matrix.

18 Throughout the entire prosecution defendants  
19 were confronted with 45 and 46 moving through the Patent  
20 Office together.

21 If the defendants knocked out 45 and not 46,  
22 it would do them no avail. So a lot of the arguments indeed  
23 were focused on a matrix.

24 I still do not believe that matrix winds up  
25 being read into 45. But that isn't the real problem.

1 The problem is reading in error for stuck  
2 switch. The problem is reading all of this other material  
3 into the claims. And that is what this entire trial has been  
4 about: An attempt to do that. I regard it as impermissible. But why did it  
5 occur? Why, over all those years, did it occur that these  
6 items are being sought to be read into the claims?

61  
1 They couldn't be inserted in the claims in  
2 the Patent Office for a very good reason. For this lawsuit to  
3 have a financial significance, Bally had to proceed in this  
4 lawsuit on claims that went all the way back and remained  
5 unchanged since 1978. If there was a change, the slightest  
6 change, the slightest asterisked, italicized word introduced  
7 into the claim, then the claim is effective for purposes of  
8 damages only as of November or December, 1983. The pinball  
9 business is relatively nonexistent compared to its status  
10 earlier.

11 That is what occurred. So the claims had to  
12 come through the Patent Office intact and are sought to be  
13 burdened with the combination of hardware and software  
14 granting noise immunity and noise prevention techniques,  
15 error recovery for a stuck switch.

16 Now, the documents in the Patent Office, the  
17 accumulation of alleged evidence to show complete conception,  
18 is completely devoid of that, completely devoid of it. It is  
19 a compelling admission, your Honor, that it was never intended,  
20 that those claims were never intended in fact to recite these  
21 items, and the Patent Office never intended them or thought  
22 them to be so recitative of these items that appear on 469, I  
23 believe, the infringement summary.

24 Let us proceed then, your Honor, if I may,  
25 to also compare one other item. Your Honor saw in the

1 context of the reissue proceedings what was established, as  
2 I imagine everyone will agree, and the defendants have a  
3 burden to prove the claims are invalid by clear and convincing  
4 evidence. That burden remains with plaintiffs throughout the  
5 entire proceedings. It does not change. Certain items can  
6 make the burden according to this Court of Appeals for the  
7 Federal Circuit perhaps easier to discharge, but the burden  
8 remains.

9 We accept that burden and we say that although  
10 this Court must determine ultimately whether Claim 45 is indeed  
11 patentable as non-obvious or not, there is one thing that was  
12 determined in the Patent Office, and that is what is not  
13 patentable. And what is not patentable, your Honor, is  
14 original-claim 1.

15 Your Honor will recall that original claim 1  
16 differs from claim 45 in a very, very minor respect. Original  
17 claim 1 calls for a game apparatus having a physical mass  
18 capable of motion. Claim 45 recites, "A pinball game with a  
19 ball in a downwardly inclined playing field."

20 Now, the testimony is that pinball is an  
21 extremely unique environment, an extremely unique environment  
22 which requires particular problems and particular efforts be  
23 exercised in noise preventions, noise immunity, error recovery  
24 for stuck switches, et cetera, et cetera. Why are those  
25 inventions not equally advantageous and non-obvious in a

1 slot machine such as the Saxton slot machine under claim 1?

2 It is sitting next to another slot machine.

3 It has lights. It has lamps. It has solenoid. It has  
4 motors that make the reels go round. Why is it not patent-  
5 able in that context?

6 Such an argument was never even advanced to  
7 the examiner. It was never suggested in response to claim  
8 1's rejection that Saxton in these other devices do not  
9 disclose the combination, the unique combination of noise  
10 immunity and noise suppression techniques, error recovery  
11 techniques that have been advocated here.

12 And so when Professor Kayton testified, as  
13 he did, he was asked to assume that all of the various  
14 activities of Atari and whatnot were not prior art; and with  
15 those assumptions, why was it that there was never advanced  
16 in the Office any basis for patentability based on these  
17 matters?

18 He answered, well, it was never necessary.  
19 There was never a viable invention. It was never advanced  
20 with respect to claim 1, either.

3062  
Furthermore, to say there was never a rejection

is not the case. The examiner in this case again and again rejected the claims and reversed himself. The examiner rejected the claims under 102A in the first office action, withdrew it in the second, reinstated it in the third, withdrew it in Paper 145. The examiner on 102G, prior invention of Atari, to give the Court an example, rejected in the first office action, withdrew it in the second office action, rejected in the third, rejected in the fourth, withdrew it in the fifth, rejected in the -- withdrew it with a notice of allowance, rejected it in the fifth office action, rejected it in the seventh and withdrew it in Paper 145.

So, there were many, many rejections, many, many rejections that occurred, your Honor. And indeed, I do believe that this case is one which properly reflects an instance where, as Judge Learned Hand said in the case of *Lyon v. Boh*, 1F2d 48, "The ant-like persistency of patent solicitors overcame the examiner."

In response to all of these arguments, all of these rejections, there was never a single instance. Now, your Honor, that is why a proper interpretation of the claims requires, merely requires someone to look at the file history. Dr. Schoeffler didn't look at the file history, and none of these arguments about self-cleaning digits and the like, indeed the words do not even appear in the file history, in



1 those twenty-odd volumes. We never see the term "self-  
2 cleaning digits" at all.

3           Proceeding to the merits of the non-obviousness  
4 case, your Honor is well aware that the Supreme Court case of  
5 *Graham v. John Deere* indicates that the Court is to look into  
6 the scope and content of the prior art, the differences be-  
7 tween the claimed invention and the prior art, and the level  
8 of skill in the relevant art.

9           The relevant art in this case, your Honor, is  
10 a relevant art that clearly requires an understanding of pin-  
11 ball and microprocessors. Microprocessors were an exploding  
12 technology. It was an exploding technology, and the courts  
13 have been confronted with this for a number of years.

14           In the *New York Racing Association* case, the  
15 Second Circuit indicated that --this was a case, your Honor,  
16 which involved computerizing totalisator devices. Totalisa-  
17 tor devices were the devices that years ago would electro-  
18 mechanically change the odds at the race track, as the betting  
19 continued before a race, the odds would constantly change  
20 because of the various bets on various horses. And this was  
21 all done electromechanically. Eventually, that particular  
22 item was computerized. One can say it was, it was ideal  
23 for computerization.

24           But in the *Digitronics v. New York Racing*  
25 *Association* case, it was recognized that indeed, the talent



1 of the computer engineer had to be applied in order to de-  
2 termine obviousness. The Court said:

3 "However, the benefits that accrued from re-  
4 placement of electromechanical by solid state  
5 electronic means increased accuracy, speed, com-  
6 pactness, flexibility, reliability and economy.  
7 They were nothing more than the recognized advan-  
8 tages of electronic upgrading of a data processing  
9 system. Once the art is extended to include all  
10 data processing, applicants' only claim of syner-  
11 gistic results is based on -- " it goes on, based  
12 on a limited claim which the Court found not valid to support  
13 patentability.

14 That is what occurred here, and what actually  
15 occurred, the Court can see can be vividly and graphically  
16 analyzed or illustrated by the Intel ad.

17 The Intel ad, your Honor, is one of about  
18 eight references which mention microprocessor-controlled pin-  
19 ball.

20 Here is an industry in explosion, the micro-  
21 processor industry. Games, traffic lights, hamburgers, scales,  
22 control systems, bottle-filling machines. Microprocessors  
23 were finding their way into all aspects of American life and  
24 American technology.  
25

1 In the ad, more than a year before the patent  
2 was filed, there are two suggestions of use of microprocessor,  
3 and the second one indeed was held in the Patent Office to  
4 provide an impetus, to provide an impetus for using the micro-  
5 processor in the pinball game, because it indicates, "Pinball  
6 machines and slot machines, a microcomputer makes them more  
7 fun and imaginative."

8 You can do more things. You can change it  
9 more easily.

10 It was an apparent advantage, and it was an  
11 advantage that was seen by many technologies.

12 And that is why, your Honor, at the very  
13 outset, you say, "Well, if someone said, well, how am I  
14 going to do this? How am I going to wind up using this  
15 device?" the first place one would go would be to the MCS 4  
16 user's manual.

17 You buy a unit, this tells you how to use it.

18 February 1973. In February 1973 there's an  
19 indication that an MCS 4 computer system does exactly what a  
20 pinball machine needs:

21 A number of peripheral devices, such as  
22 keyboards -- well, there's no keyboard, but switches; indica-  
23 tor lamps, numeral devices, printer mechanisms, relays,  
24 solenoids, have to be interrogated or controlled.

25 precisely the problem. Precisely the problem.

1 The solenoids are as noisy in any device as  
2 they are in a pinball machine. Indicator lamps going on and  
3 off represent what they represent by noise. Keyboards,  
4 switches, those items had to be debounced.

5 That is where we begin. That Intel in  
6 February of 1983 -- '73 -- the Intel manual said, in essence  
7 of the devices that can be controlled by a microprocessor:  
8 Here is a possibility for switches, lamps, numerals and sole-  
9 noids, that Mr. Frederiksen announced was precisely what he  
10 did.

11 Now, if your Honor will consider what does  
12 claim 45 say.

13 And if we look at this prior art, let us look  
14 at this prior art and see the differences between the prior  
15 art and the claim.

16 Well, it is true the Intel manual does not  
17 disclose a pinball game. But the Intel ad does. So an Intel  
18 -- a pinball game with a microprocessor in it.

19 And, indeed, an Intel microprocessor is some-  
20 thing that can very easily be taught by the combination of  
21 these devices.

22 But if we just look at the Intel manual alone:  
23 There isn't a pinball game in the manual, but there is a  
24 processor disclosed, and that processor is one that has  
25 programming means and memory means.

1 That appears in this manual. It inevitably  
2 does, because the arrangements of the MCS 4: We had a pro-  
3 gram and a memory. Admittedly, there wasn't a ball, and  
4 there wasn't a downwardly inclined playing field. That  
5 didn't exist. It didn't exist in the manual. We'd have to  
6 go to the ad for that.

7 Neither are there player operated means for  
8 ejecting the ball on the playing field. That was a pinball  
9 device.

10 But as we come down for the remainder: A  
11 plurality of response means for detecting the ball.

12 We have switches disclosed that can be  
13 interrogated and controlled. That's what this response means  
14 is.

15 And, indeed, when it says interrogated and  
16 controlled, we are talking to anyone of skill in the art that  
17 those response means would have a signaling means associated  
18 therewith and would be operatively connected.

19 The Intel manual tells you that you might  
20 have to interrogate and control switches, lamps and the like.

21 A plurality of display means for presenting  
22 information.

23 The Intel manual says, yes, lamps and numeral  
24 displays, precisely what the Flicker has; goes on to say now  
25 multiplexing means.

Well, where is the multiplexing means?

The multiplexing means appears on the next page.

How do you do this? It refers to multiplexers here. But the plaintiff says the multiplexers referred to there could be different than the matrix multiplexing that they talk about.

But this is matrix multiplexing of switches. Matrix multiplexing of a matrix of switches is disclosed, and it is a multiplexing means operatively connected to the processor.

And Professor Schoeffler testified that this disclosure indicates a cyclic and sequential strobe of the matrix, that that is involved in this disclosure. No doubt about it.

As we come down, it is further a matrix, which would import Claim 46.

This very multiplexing means then is disclosed on the next page. That's how you can arrange some switches.

But how about the enabling the signaling means to signal the processor, et cetera? How about a single matrix? How about a single matrix?

You go to the next page, and it says, "In-systems which combine a numeric display" -- lamps, the lights -- "and a keyboard" -- switches -- "considerable savings in program memory space and external hardware can be achieved

1 by combining the display scan and keyboard scan."

2 Put them together in the same matrix.

3 Now, what was Professor Shoeffler's complaint  
4 about this? He said this is the same as Flicker, your Honor,  
5 except there are no diodes in the matrix.

6 But then he found that indeed on the playfield  
7 of Flicker there are no diodes in the matrix.

8 So the matrix disclosed on page 52 is the  
9 matrix and the multiplexing means here.

10 Now, if that be the case, if we can find in  
11 the broad statement of multiplexing means a response: here's  
12 a matrix, here are components that affect that matrix and  
13 multiplex switches and displays.

14 Why is it necessary for us to import into  
15 that claim error recovery for stuck switches and all those  
16 items.

17 Here is the item you import into the claim.  
18 When it says multiplexing means, arrange the switches somehow  
19 or other and multiplex them.

20 To give the Court an example: What if, in-  
21 stead of an electrical decoder that strobed the columns, as  
22 your Honor has heard for twenty days of trial, what if there  
23 was a quartz timer that literally moved a very small contact  
24 across the contacts of the columns.

25 Now we would say: Oh, we have a different

1 way of effecting the strobing in this case. We have a dif-  
2 ferent way.

3 Is that an infringement?

4 That is the type of inquiry which is intended  
5 by: "Look at the multiplexing means and go back and see if  
6 there's a similar means, operation and result."

7 If, for example, the accused infringer could  
8 prove that the quartz timer gave you better control, extremely  
9 precise control in time, I get much better advantages from it,  
10 there is a difference.

11 But here we would have a matrix which, in-  
12 stead of using an electrical strobe, uses a quartz device  
13 with a little arm on it that moves across it.

14 It was never intended as the law of  
15 patents that this means clause, this means clause enabled  
16 you to import every item in your specification into the means.

17 The means here has been read to include other  
18 claims; it has been read to include items that are in the  
19 software.

20 And when we get to the infringement case, we  
21 will see that the flexibility there increases greatly.

22 Finally:

23 "The processor has means for storing the  
24 signals from the signaling means enabled by the  
25 multiplexing means in the memory means for



1 addressing the program means and the memory means  
2 and for signaling the displays," et cetera.

3 This is all disclosed in this manual. Every-  
4 thing is disclosed in the Manual 1-A, your Honor, save for a  
5 pinball machine.

6 Now, the law is clear that if indeed there is  
7 to be a problem and a solution, that the problem and solution  
8 have to be hinted at in the claim. In the claim.

9 Because this claim is intended to be a cir-  
10 cumscribing deed, a circumscribing deed which, as your Honor  
11 can see, because of its breadth in language in some respects  
12 enables it to be read on five machines that are very diverse  
13 from the Flicker, but because of the importation ability of  
14 means, enables it to import a number of items which allegedly  
15 cause it to escape invalidity.

16 The claims are supposed to afford people that  
17 read them an ability to know how they can be avoided. One  
18 should be able to pick up a claim and determine how it can  
19 be avoided.

20 In this case that is absolutely impossible.

21 The Pro-Log Manual similarly, your Honor --  
22 and the Pro-Log ad is just no more than another recitation of  
23 the same.

24 Here is Pro-Log, and the significant thing is  
25 that on the cover of their brochure they choose to illustrate



1 a pinball game, because pinball classically represents, per-  
2 haps, a little pizzazz. But clearly switches, solenoids,  
3 lights, numbers in a matrix -- not in a matrix -- but it rep-  
4 resents a need to control them, to correlate them.

5 When you hit this switch, the number has got  
6 to change, a light has got to go on, a bell must ring.

1 It is without doubt a classic application.

2 If that classic application is a classic application which had  
3 particular problems, then those particular problems should  
4 have been addressed in this claim. Those particular problems  
5 should have been part of Mr. Frederiksen's conception. They  
6 were not. These claims were argued to have been conceived  
7 in December, '73. Based on this evidence, they could not have  
8 contained those items.

9 I also want to point out to the Court that  
10 the Saxton -- that the prior art, that the Patent Office found  
11 Claim 1 unpatentable over, was a slot machine. And in that  
12 instance, so the Court will understand, the physical mass  
13 capable of motion were the reels. Slot machines have the  
14 reels with the watermelon, cherries, bells and the like on  
15 them. And when you activate it, they have to move giving the  
16 illusion, anyway, of chance so that you line up and get three  
17 watermelons and three bells or what have you. That was the  
18 physical mass.

19 When that physical mass is controlled, it  
20 was unpatentable, according to the Patent Office.

21 As Mr. Goldenberg pointed out yesterday, there  
22 was an unrealistic and slavish adherence to the concept in the  
23 Patent Office by the examiner that it had to be a pinball  
24 game. But why? There wasn't a mention, there was not a men-  
25 tion of any of these items of error recovery for a stuck

1 switch as being solved in this device.

2 That brings me to the next point, your Honor.

3 Mr. Goldenberg mentioned that although in the Patent Office  
4 the prior art, prior invention by Atari, could, had to be  
5 proved by a high burden of proof. If we were to sustain our  
6 burden of Atari, we needed a high level of proof.

7 In this proceeding, that high level of proof  
8 devolves equally onto Frederiksen. It devolves onto Freder-  
9 icksen with the same force that it devolves onto -- with  
10 Atari.

11 And so I want the Court to consider what  
12 Frederiksen's situation is. There is no current drawing of  
13 that machine. The one drawing of its circuit was allegedly  
14 prepared months in advance, and others were prepared later,  
15 altered in various fashions by Mr. Smith.

16 There is no evidence of what the program was  
17 at the time. There is no documentary evidence of the spark  
18 test. The only documentary reference to the spark test  
19 appears in a letter to Mr. Conroy from Mr. Nutting on October  
20 18th saying, "We have now" -- this is after September 26 --

21 "We have now finally debugged the device and  
22 spark-tested it."

23 There is not one iota of evidence that sup-  
24 ports the notion that on September 26, the machine was in  
25 any particular condition. There is not one iota of evidence

1 that supports, other than Mr. Frederiksen's testimony, that  
2 supports the idea that interlock, no scan during solenoid  
3 closure, switches being double read, that any of this occurred  
4 on that date.

5 Now, if your Honor will consider the situation  
6 that plaintiff benefits from, because of Atari, is here we  
7 had a company that kept records. Weekly records of its  
8 machines, the Delta Queen.

9 By the time that Frederiksen was putting  
10 together the Flicker for the first time, Atari had five  
11 Delta Queens manufactured. Five, and they were chronicling  
12 them week by week. Every week they are mentioned.  
13 Anything in those reports, in the correspondence, in the  
14 considerations of those machines that is in the least bit  
15 derogatory is cited by the plaintiff as a failure, as a  
16 failure of that machine.

17 But, what do we have on Flicker? We have not  
18 one document. We have some reports, admittedly of Bally  
19 people coming back. They saw a demonstration. But, they  
20 didn't know how it worked. They just knew there was a con-  
21 trol. They didn't know whether all these noise prevention  
22 and immunity factors had been employed as of that date.

23 There is only one person who told us that,  
24 only one person, and that's Mr. Frederiksen.

25 Consequently, your Honor, if we look at the

1 scope and content of the art, we realize we must consider  
2 the microprocessor art. It is irrational not to. The cases  
3 uniformly hold that in looking to the relevant art, one must  
4 look to the art where the problems exist, not look to the  
5 pinball art.

6 Your Honor knows that the individuals that  
7 were dealing strictly with electromechanical pinball could  
8 not be expected to interface a microprocessor, but everyone  
9 did go to a microprocessor house.

10 But let's get now to just, to address what  
11 indeed did the applicants do in these noise prevention and  
12 noise immunity techniques, just briefly.

13 The examiner commented about things such as  
14 boards in the back box and power supply, isolated from the  
15 logic board. The examiner commented and said if you solve  
16 the problem by such matters, apparent vehicles as component  
17 isolation, then that's not going to get us anywhere. The  
18 examiner considers the cold lamp current limiting aspect of  
19 the invention. That's the low beta transistor. And every  
20 time he considered that, the dependent claim reciting that  
21 low beta transistor, Claim 29, he rejected it on the Fair-  
22 child manual. He said, "Everybody knows that you use a tran-  
23 sistor like that for a lamp if you want a soft start. That's  
24 apparent."

25 If we talk about debounce, there is debounce

1 in 1-A, the Intel manual; there is debounce in the Pro-Log  
2 manual; debouncing switches is standard. People, as I believe  
3 Professor Schoeffler said, everybody debounces. Mr. Freder-  
4 iksen admitted that debounce was standard.

5 What else do we have? No scan during solenoid  
6 closure. That was a new one. It is a consideration, Dr.  
7 Schoeffler said, that is so inherent in the Flicker game that  
8 even though it doesn't have dropped targets, if you put  
9 dropped targets in a game, you would know that you had to  
10 do it.

11 That, your Honor, is a, the furthest limit of  
12 stretching.

13 Interlock, the concept of Interlock, the  
14 concept of Interlock began in the case of the plaintiff as  
15 being the concept of not turning on solenoids during switch-  
16 scanning procedures. Then it became apparent that the two  
17 accused infringers had all their solenoids all over the board,  
18 all of those real time solenoids weren't even attached to the  
19 microprocessor except through the tilt switch. They operated  
20 essentially the same way they operate in an electromechanical  
21 game; that is, they are operated by the impulse of the ball  
22 and they respond.

23 MR. KATZ: Excuse me, your Honor. Would you pre-  
24 fer if I make objections now, or should I reserve some of  
25 the comments with respect to what I believe are not correct

1 characterizations of the evidence?

2 THE COURT: Well, save it till your argument and  
3 then you can point it out.

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b1  
1 MR. LYNCH: Let me get back on that, your Honor.

2 There was testimony and your Honor was here  
3 where it was indicated that these various devices are not  
4 turned on in response to a ball hitting it by the micro-  
5 processor. Hence, they can be activated any time during the  
6 switch closure. They are controlled through an enabling  
7 switch. They are controlled through a tilt switch by the  
8 microprocessor. But, that isn't the interlock to which  
9 Professor Schoeffler referred.

10 What items indeed are left? Switches double  
11 read. That was in the Intellec manual. The Intellec manual  
12 says if you want to avoid very narrow noise spikes and  
13 interpreting them as valid switch closures, double read your  
14 switches..

15 Dr. Schoeffler said, "Oh, but that prevents  
16 cross talk between the wires."

17 That doesn't tell you to prevent other types  
18 of very narrow spike noise. Indeed, I submit, your Honor,  
19 it was a standard technique. In fact, it was the same tech-  
20 nique Mr. Frederiksen used. And Mr. Frederiksen started with  
21 the Intellec and just imported his program into the MCS 4  
22 system when he got off the Intellec.

23 There is nothing about any of the individual  
24 factors here that is unusual or unexpected. They act they way  
25 they are expected to act. So, we came down to the idea of a

1 combination of hardware and software, the combination being  
2 such that it would enable you to build a successful machine.

3 And the Court indicated, the Court asked  
4 Dr. Schoeffler, "If I had nine hardware techniques that were  
5 dissimilar to anything had by Mr. Frederiksen in the Flicker  
6 machine, and one software technique dissimilar to anything that  
7 Mr. Frederiksen had in the Flicker machine, and by combination  
8 they allowed me to make an operable pinball machine, would I  
9 infringe?"

10 And Mr. Schoeffler said, "Yes."

11 Now, is that a valid application of similarity  
12 of means, operation and result? It is a very large slice of  
13 the pie that Mr. Frederiksen attempts to cut for himself if  
14 that's the scope of his claim. And indeed, all of these  
15 items in the combination have been interpreted precisely that  
16 way.

17 The level of skill in the art is the digital  
18 electronics engineer's understanding microcomputers and having,  
19 of course, a working knowledge of pinball.

20 We have the Delta Queen at the AMOA show in  
21 October. We had it earlier, El Toro. All of the people  
22 dealing with the Delta Queen and the El Toro and the other  
23 devices had this experience.

24 Now plaintiff will say, however, they failed.  
25 They failed primarily because allegedly plaintiff can look at

3  
1 problems. There was never a feasibility problem. The  
2 feasibility of the machine, the microprocessor-controlled  
3 pinball machine, was proven at Atari and Atari was a growing  
4 company.

5 But what is another item of evidence? Well,  
6 what happened, your Honor, at the time of the September 26  
7 meeting?

8 Mr. Bracha came back. Mr. Bracha went to  
9 Mr. Englehardt and Mr. Englehardt said, he said to  
10 Mr. Englehardt, "Let's figure out what's in that machine.  
11 Figure out what's in that machine, because I don't know."

12 And in a matter of a day or two, Mr. Engle-  
13hardt came up with a system that he said, "Here is an estimate  
14 on how they could be doing it." Mr. Englehardt wasn't taken  
15 aback. Mr. Englehardt didn't gasp in surprise. Mr. Englehardt  
16 produced an architecture, virtually immediately.

17 Mr. Englehardt then, and Bally eventually  
18 never adopted the Frederiksen technique; they rejected the  
19 Frederiksen technique; they went their own way and had a  
20 machine that they represented to the Patent Office under oath  
21 was reduced to practice prior to May 10, 1975.

22 It is then a classic instance where the  
23 people at Bally who were given the job of developing that  
24 machine by Mr. Englehardt and Mr. Bracha, electrical  
25 engineers who understood computers and understood noise

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ed 1  
2 And when the plaintiffs say, "We solved the  
3 problem," they refer to one day in history, September 26, 1974.  
4 And supposedly having demonstrated the device on that day,  
5 there is never an instance where it was sent to a pizza parlor  
6 where kids could get their hands on it. There was never  
7 another thing that occurred with the Flicker machine.

8 What happened thereafter, as plaintiff said,  
9 "We solved the problem."

10 I submit that the proof doesn't exist, that  
11 indeed, your Honor, if one considers that these are standard  
12 noise-fixing techniques, that those noise-fixing techniques  
13 could be used in virtually any combination by engineers in  
14 the ways that they chose.

15 Your Honor, I call to the attention of the  
16 Court the CCPA case application of Theis, 610 F. 2d 786. CCPA  
17 said, "We agree with the Court that the problems associated  
18 with pause timing, spurious noise from use, radio interference  
19 and other nearby equipment, drilling filters, arcing relay  
20 contacts, were solvable by routine debugging set-up and  
21 installation adjustments."

22 In the footnote the Court says: "It appears  
23 that all these problems were solved without the need to change  
24 any of the major functional blocs of the system. Flattening  
25 filter response, supplying arc suppression and radiofrequency  
interference, suppression capacitors, adjusting pause

1 intervals and minor tune-up procedures are not requiring an  
2 inventor's skills, but, rather, the skills of a competent  
3 technician such as appellant's assistant, Buchburger."

4 Your Honor will also recall that when noise  
5 prevention and immunity techniques were considered,  
6 Mr. Frederiksen was asked to testify in his deposition, and  
7 said, "Is there anything unusual about noise? Give us some  
8 techniques." He said, "Well, some techniques would involve,  
9 as set forth in 19-F, grounding the metal on the cabinet,  
10 putting the back-shielding backbox, using RC couplings, using  
11 power line filters."

12 But Mr. Frederiksen in his direct examination  
13 said none of these would solve the problem alone. None of  
14 these would solve the problem alone. And in fact, he used not  
15 a one of them, not a one of these noise suppression techniques  
16 were used by Mr. Frederiksen. But when we look at Bally,  
17 Bally used all of them.

P 1 Williams used all of them. Gottlieb used all  
2 of them. And the basis for determining infringement then  
3 becomes what?

4 Well, there's a combination of hardware and  
5 software. Not the required test that the grounded metal cab-  
6 inet -- we have to look to the means used there and find an  
7 identity of means, operation and results, an identity of  
8 means, operation and result about back box shielding, an  
9 identity of means, operation and result about RC coupling,  
10 an identity of means, operation and result about power line  
11 filters.

12 Power line filters, indeed, your Honor, used  
13 by the Bally Alley machine, a microprocessor controlled  
14 arcade game.

15 The entire noise position is -- I regard as  
16 a fallacy.

17 Let me go to the secondary considerations,  
18 which will be argued at length. The secondary considerations,  
19 Bally will say they have outstanding commercial success.

20 I think your Honor understands that the out-  
21 standing successful games have a notice of two patents in the  
22 back: the Bracha patent and the Nutting patent.

23 Your Honor has seen some submissions of Bally  
24 made to the Patent Office that the Bracha patent contains  
25 advantages in suppressing radio interference over the Nutting



1 patent, and other advantages allegedly of economy in a pinball  
2 environment. These are statements made.

3 Where is the nexus, your Honor, between the  
4 commercial success and the claimed items of the Nutting  
5 patent? That is what must be proven to make commercial  
6 success a valid secondary consideration.

7 The Stern license is alleged as a recognition  
8 by a co-company, competitor in the industry that supports the  
9 notion of commercial success.

10 Stern knocked the machine off. It was com-  
11 pletely duplicated. And indeed, Stern was equally desirous  
12 of getting a license and freeing itself from any possibility  
13 of trouble with Bally.

14 It simply is not valid to say that the com-  
15 mercial success nexus has been satisfied.

16 Now, your Honor, there are other items of  
17 art, but I think that basically the Intel manual and the  
18 Intel situation satisfied the aspects of the claims, except  
19 for pinball.

20 When we move on to the other, next defense,  
21 the next defense is that if indeed the claims mean all these  
22 things they say, that Bally says they mean, they fail to comply  
23 with 35 USC 112.

24 35 USC 112 is a section that requires in the  
25 second paragraph:

1 "The specification shall conclude with one  
2 or more claims particularly pointing out and distinctly claim-  
3 ing the subject matter which the applicant regards as his  
4 invention."

5 I submit, your Honor, that if indeed those  
6 claims import all these items into the claim, there cannot  
7 be a distinct claim under Section 112.

8 The Court of Claims has indicated that in  
9 Pratt and Whitney v. the United States:

10 "The purpose of the above section is to  
11 apprise the public of the limits of the invention  
12 so others may use that which is not protected."

13 That is at 145 U.S.P.Q.435.

14 But even more importantly, your Honor, we  
15 have provided the Court with a brief that indicates one may  
16 not read these limitations into the claims.

17 The Lundberg case and many cases indicate that  
18 one may not use the means clause as a freight train to drive  
19 into the claim whatever one desires.

20 It simply makes the claim -- and if indeed  
21 that's the invention, the invention is this combination of  
22 hardware and software, the claims are fatally vague, because  
23 they fail to apprise anyone of that fact.

24 The first paragraph of 112 is also a basis,  
25 Your Honor. The first paragraph of Section 112 indicates:

1 "The specification shall contain a written  
2 description of the invention and the manner and  
3 process of making and using it in such full, clear,  
4 concise and exact terms as to enable any person  
5 skilled in the art to which it pertains or with  
6 which it is most nearly connected to make and use  
7 the same, and shall set forth the best mode con-  
8 templated by the inventor to carry out his inven-  
9 tion."

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Your Honor received a color-coded copy of the

specification. The items that were read into that specifica-  
tion, if indeed they were intended to mean that, do not satis-  
fy the full, clear and concise requirement.

At one point the specification indicates:

"There are four ports on the microprocessor,"  
and that was held to mean that one used the KBP instruction  
to ignore stuck switches.

It was simply, your Honor, another gross im-  
portation of these limitations into the specifications when  
they were not justified.

But in particular we have the situation of  
the software. And the software, your Honor, is an item --  
the software, it was suggested by Professor Kayton, the soft-  
ware, in view of the entirety of the prosecution, it was  
clear the software was part of the specification, and -- it  
was clear it was part of the specification.

So defendant said: Wait a minute. Kind of  
near the end of this thing you folks said to the Patent  
Office, "Further, even though the program listing is a part  
of the original application" -- those are the words that are  
used for the most part, "part of the original application,"  
not part of the specification, that's what was said for the  
most part -- "the specification by itself sufficiently defines  
the operation of the claimed invention."

1 Professor Kayton came along and said: "Oh,  
2 that means the cyclically and sequentially. That's right."  
3 That's not what this says.

4 "Therefore, it is irrelevant if the program  
5 listing is or is not part of the specification."

6 Now, what went on prior to that? Does the  
7 record support the fact that because Bally said it was part  
8 of the application, it was?

9 At PX1, page 107, protesters say:

10 "The '232 patent says not one word about  
11 switch debouncing. It is not in the specifica-  
12 tion or in the claims."

13 Debouncing is software.

14 Page 455:

15 "The patent not only does not address the  
16 solution of such software difficulties, it does  
17 not even identify the problems. The patent does  
18 not even contain the software listing for the  
19 non-commercial Flicker game."

20 This is Defendants' position.

21 Page 612 of PX1:

22 "Such programming is not and cannot be a part  
23 of the invention. The software program is neither  
24 set forth in the patent nor even referenced in the  
25 reissue application."

Page 936:

"There is nothing, there is no concern about stuck switches and no concern about debouncing switches in the patent."

Page 967:

"It has been admitted that the software plays no part of the invention. No software listing is included in the re-issue application. There is nothing left."

1558:

"The term cyclically and sequentially does not appear in the specification, and the software supplied by the applicant at the filing is not part of the patent."

There was a battle about it.

Near the end of the battle they said: It is irrelevant. But they offered to submit the software listing to the office, but at the same time said it was irrelevant.

The examiner said: "All right."

The defendants came along and indicated that they objected.

In response to that objection, the examiner withdrew the requirement.

There is no way that this statement on page 1574 of PX1, the statement that:

1 "It is irrelevant that the program listing is  
2 or is not part of the specification," is directed  
3 to one given part of it.

4 It says: "The specification by itself suffi-  
5 ciently defines the operation."

6 There was a raging controversy about this,  
7 your Honor. And when that patent issued without the specifi-  
8 cation -- without the software in the specification or in-  
9 corporated by reference.

10 Just to explain that to your Honor.

11 There are two ways it can be included: the  
12 current rules indicate that if the software listing is nine  
13 pages or less, it must be printed.

14 This is nine pages. It must be printed.

15 But there are two ways to incorporate docu-  
16 ments in the specifications. The first is just to print it.  
17 The second is to use the words, "I hereby incorporate by  
18 reference X, Y, Z."

19 So even when the microfiche typed programs  
20 that Professor Kayton talked about are deposited in the  
21 Patent Office, there must be today, and there must have been  
22 as of the time this issued in November 1983, there must be a  
23 reference to that.

24 Otherwise the person that picks up the patent  
25 has no knowledge that it exists. He has no knowledge that it



1 exists, and he has no way of understanding the claims, of  
2 understanding this alleged disclosure.

3 Professor Kayton imported into the process  
4 a patent attorney. He said, "His patent attorney would know,"  
5 and he would have to call a patent attorney.

6 Such is not the case, your Honor.

7 The patent does not satisfy the description  
8 requirement of Section 112.

9 Finally, your Honor, I'd just like to comment  
10 upon what the Court heard here briefly.

11 They heard Professor Kayton say that in order  
12 to interpret claims one must review the file history. He said  
13 that at a number of instances.

14 I objected to Professor Schoeffler reading  
15 the -- undertaking an infringement analysis on grounds that  
16 he indicated he never looked at that. He never looked at  
17 the file history.

18 The Court said, in response to my objection:  
19 "It seems to me on the contrary, he" -- mean-  
20 ing Dr. Schoeffler -- is hamstrung. If the file history  
21 bears upon the scope of the claims and he's un-  
22 familiar with that history, it seems to me the  
23 problem is his, not yours."

24 The Court is saying that to me.

25 Professor Kayton sat on the stand yesterday

1 and said absolutely, two times, that one cannot construe  
2 claims without referring to the file history.

3 The other item I would like to recollect for  
4 the Court is the fact that there is a heavy burden on plain-  
5 tiffs to establish this early date.

6 Mr. Frederiksen: Mr. Frederiksen remembered  
7 in detail a drawing that he put on a blackboard in December  
8 of 1973. He remembered it to the week in which it  
9 occurred. He reconstructed that drawing years later.

10 He reconstructed another drawing a little bit  
11 different that he prepared several weeks later in 1973, and  
12 that has been the basis of Plaintiff's case throughout the  
13 Patent Office as to when the conception of this occurred.

14 Although Mr. Frederiksen did that, he had no  
15 recollection of the re-wiring in the back of the cabinet, of  
16 the late chips in the cabinet, about the changes. All of  
17 those items he neglected to -- he fails to remember.

18 Mr. Nutting indicated that -- or, there was  
19 general testimony that the Flicker game arrived early in  
20 July or thereabouts, and was operational by mid-August.

21 The testimony and the only evidence that Bally  
22 has is that it was shipped on August 20.

23 Your Honor, there are just not enough facts  
24 to support an inference that the Flicker game was truly an  
25 operational, viable, ready-to-commercialize pinball game on

1 September 26th. It just is not supported.

2 The only thing we have is oral testimony. And  
3 with respect to many of these matters it's uncorroborated.

4 With respect to non-infringement, your Honor,  
5 I think my point goes along with what I said earlier.

6 The infringement case is one where a single  
7 matrix machine is read on multiple matrix machines. The case  
8 is one where Frederiksen's device, which simultaneously looked  
9 at switches, lamps and numerals in a single matrix and had  
10 simultaneity, and at the beginning, if your Honor will recall,  
11 it had to be reasonably regular, or there would be flicker  
12 in the lamps and flicker in the numerals.

13 None of that happens in these machines. Each  
14 device: the numerals, the lamps, and the switches are  
15 arranged in their own matrices, and they go around the way  
16 they want to go around.

17 The microprocessors are a great deal faster  
18 in some of these machines, and they wind up doing things in  
19 an entirely different fashion.

20 The only commonality, the only commonality  
21 is, they use a matrix and they have to account for noise.

22 But where we come down to, then, is matrix,  
23 because there is no noise in the specification. If indeed  
24 there is basically no evidence that supports the conclusion  
25 of infringement.

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Now, your Honor, with respect to unenforceability, it simply is that I believe defendants have labored, and as I argued earlier, have labored long and hard with a number of affidavits that have been grossly wrong in the Patent Office.

Those Patent Office proceedings have been fundamentally based on allegations of the extreme success and how the Flicker game satisfied all of the problems that have existed in pinball.

That was the basis, that is the basis of the argument.

The only thing we have is September 26 and Frederiksen saying orally that that occurred.

Finally, your Honor, Rockwell.

Just to apprise your Honor of that: Rockwell supplied microprocessors; they did work, as would be necessary, with the pinball people at Gottlieb to produce those microprocessor boards.

But where was Rockwell, and where does the evidence indicate that Rockwell was an inducer of infringement, when the infringement is this mystical combination of hardware and software.

Where did the hardware that was contributed by Gottlieb end and the hardware contributed by Rockwell end and the software contributed by each end?

1 When does infringement of something this  
2 mystical, how does one induce infringement of it?

3 I believe, your Honor, that there's been no  
4 evidence that can establish that Rockwell has induced infringe-  
5 ment of a claim that involves a combination of noise preven-  
6 tion and immunity techniques and real time, et cetera.

7 Finally, there was an assertion against Rock-  
8 well, Your Honor, that indicated that they infringed by  
9 supplying computer boards, microprocessor designs to the  
10 Brunswick Corporation. I don't even believe that's been  
11 introduced in evidence, I don't know.

12 But I certainly believe that there has been  
13 no evidence sufficient to carry the burden establishing that  
14 Rockwell induced or contributed to an infringement by Bruns-  
15 wick, because to have an induced infringement, to have a  
16 contributory infringement, you must have proved that an  
17 ultimate pinball machine infringed.

18 There's been no evidence that a pinball  
19 machine of Brunswick in fact infringed.

20 Without a direct infringement somewhere, and  
21 proven contributory, inducement of infringement claims must  
22 fail.

23 Your Honor, I've gone longer than I thought.  
24 I thank the Court for its indulgence.

25 THE COURT: Thank you, Mr. Lynch.

1 MR. GOLDENBERG: Your Honor, I don't think I'll be  
2 very long.

3 THE COURT: All right.

4 MR. GOLDENBERG: As I said at the outset, there is  
5 of course the presumption of validity in this case.

6 And your Honor will recall that shortly after  
7 the complaint was filed Bally commenced its reissue pro-  
8 ceedings. They took that initiative to have their patent  
9 re-examined by the Patent Office, and that proceeding has  
10 occupied over five years.

11 And a number of times in the course of that  
12 proceeding the Court has said that it made sense to stay this  
13 case, to wait and see what the Patent Office did, because it  
14 was conceivable that the Court would receive technical help,  
15 technical understanding as the result of the Patent Office  
16 proceedings.

17 Your Honor, that hasn't happened.

18 As Mr. Lynch has told you, the examiner,  
19 not only in the original case but throughout the entire  
20 reissue proceedings, has never really addressed the technical  
21 issues, the technical controversies that have been put in  
22 front of you.

23 What he did was to say: If you take a known  
24 electronic circuit, a known microcomputer circuit, and put  
25 it in a pinball game, you're entitled to a patent.

I don't think that kind of consideration warrants any great deference on the part of this Court.

I think also there is another element with respect to those proceedings: Although Professor Kayton, taking what I consider to be an unusual, very unusual notion of what is an error, namely, something is an error only if it results in a holding of invalidity -- this record establishes beyond a doubt that the patent, the application for the patent, contains errors.

Now, I think, consistent with the nature of these proceedings, I have no doubt that the Court will agree with you that the Intel manual was controlled by the patent examiner and the claims were over the Intel manual.

I think, however, it is very important to say in and that the patent examiner did not have the benefit of the proceedings of this Court. And many, many things were involved here with respect to this state of the art, to the knowledge of the art, to the technology in the art, that were not available to the examiner.

And so, I think, that while the Court still never believes a presumption of validity, there is still a presumption on us. And it does remain that this Court now has a chance to affirm or reverse in the future, in all decisions, decisions, call them what you will, from plaintiff's perspective.



1 The examiner failed totally in discharging his  
2 obligation to detect and comment upon those errors. Indeed,  
3 it may be true that those errors could be corrected by the  
4 ordinary man skilled in the art. I don't think that's the  
5 case. Certainly not with respect to the computer program  
6 listing.

7 But nevertheless, it seems to me there is  
8 demonstrated a lack of care, a lack of thoroughness on the  
9 part of the examiner which detracts to some degree from any  
10 deference due his technical expertise.

11 Then in further connection with the Patent  
12 Office proceedings, I have no doubt that plaintiff will argue  
13 to you that the Intel manual was considered by the patent  
14 examiner and the claims allowed over the Intel manual.

15 I think, however, it is very important to  
16 bear in mind that the patent examiner did not have the benefit  
17 of the proceedings of this Court. And many, many facts were  
18 developed here with respect to this state of the art, to the  
19 knowledge of the art, to the technology in the art, that were  
20 not available to the examiner.

21 And so we say that while there is still never-  
22 theless a presumption of validity, there is still nevertheless  
23 a burden on us. The fact does remain that this Court now has  
24 evidence, substantial evidence in the form of admissions,  
25 concessions, call them what you will, from plaintiff's tech-

1 nical and patent experts that it is entitled to assess and  
2 rely upon in its disposition of the case.

3 This Court has an altogether different  
4 record than that which existed before the Patent Office.

5 I have one final point, and I think this is  
6 fully supportive of all that Mr. Lynch has said to you. But  
7 I put on the easel now Defendants' Exhibit 11-F. And your  
8 Honor may recall this is from page 88 of an "Electronics"  
9 magazine article bearing the date of April 18th, 1974, more  
10 than one year before the filing date, the original filing  
11 date of the Nutting and Frederiksen patents.

12 This is a general circuit arrangement of  
13 the Motorola 6800 processor and how Motorola says you are to  
14 use this in controlling whatever device you choose to control  
15 calculators, typewriters, printers, what have you.

16  
17  
18 Mr. Frederiksen, a long time ago, almost  
19 recently said to the Court that he never intended to  
20 write a patent. He also said that he never intended to  
21 write a patent.

22 I don't think the patent was a matter of  
23 ordinary course of the inventor; I don't think it was  
24 a rewritten, ordinary to the inventor's knowledge.  
25 That's what the Court is saying.

1  
2 Dr. Schoeffler said in effect that, "All I  
3 had to do was to put that in a pinball machine and have noise  
4 suppression and the Nutting and Frederiksen patent was in-  
fringed."

5 It cannot be. It is well-established and an  
6 ancient doctrine of patent law that that which if later in-  
7 fringes anticipates if earlier, there it is, this is earlier.  
8 Now, I don't argue anticipation. I don't do that. But I do  
9 say no active invention was required to take  
10 this known circuit arrangement and put it in a pinball game,  
11 something that everybody was recognizing could be done; it  
12 awaited suitable, satisfactory economic conditions before it  
13 could be done and have an invention.

14 On the question of infringement, I add only  
15 to what Mr. Lynch has said that the accused devices are not  
16 the same as the Nutting and Frederiksen circuit. In most  
17 obvious terms, nobody uses his vaunted single matrix.

18 Mr. Frederiksen almost vehemently, almost  
19 vehemently said to the Court that he never contemplated a  
20 multiple matrix; he always thought his invention was the single  
21 matrix.

22 I don't think the patent can be rewritten,  
23 contrary to the wishes of the inventor; I don't think it can  
24 be rewritten, contrary to its express languages.

25 That's what the plaintiff is seeking to

2  
1 do here.

2 Thank you.

3 THE COURT: All right. Thank you, Mr. Goldenberg.

4 I will deny the motion as to the issue of  
5 infringement and as to the issue of unenforceability. Those  
6 are items 3 and 4 argued by the defendants.

7 And I'd like to hear the plaintiff on items  
8 1, 2 and 5.

9 And I think what we will do is break now for  
10 lunch and resume at 2:00 o'clock.

11 MR. TONE: Very well, your Honor.

12 (Whereupon a recess was taken herein to 2:00 p.m. of  
13 the same day.)  
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1 THE CLERK: 78 C 2246, Bally v. Gottlieb, case on  
2 trial.

3 THE COURT: Mr. Tone.

4 MR. TONE: May it please the Court, we have divided  
5 the argument among three lawyers -- although we recognize  
6 that divided arguments are not ideal -- because it was easier  
7 to prepare it in that way.

8 I will speak briefly on the general legal  
9 principles that apply and upon the matter of reduction to  
10 practice.

11 Mr. Katz will carry the most important weight  
12 of the argument, which is the obviousness issue and the appli-  
13 cability of the patent laws, and his argument, his portion of  
14 the argument will be much shorter than mine, which will be  
15 very brief.

16 Mr. Schnayer will address briefly the matter  
17 of Rockwell, item No. 5 of the list.

18 This is as your Honor knows, a combination  
19 patent. And it is worth noting what the Court of Appeals for  
20 the Federal Circuit has said about combination patents and  
21 what is necessary.

22 It has pointed out that:

23 "A new result or function or synergism is not  
24 a requirement of patentability."

25 your Honor will recall that a few years ago

1 the matter of synergism was discussed in the Court of Appeals  
2 of this circuit. The Court of Appeals for the Federal  
3 Circuit says that that is not necessary.

4 The Court also says, and I'm quoting from the  
5 case of American Hoist and Derrick found in 725 F. 2d at  
6 1360, the Court of Appeals for the Federal Circuit through  
7 Judge Rich said there:

8 "A patentable invention may result even if  
9 the inventor has in effect merely combined features  
10 old in the art for their known purpose without  
11 producing anything beyond the results inherent in  
12 their use."



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THE COURT: Why is that something not obvious? I

mean given that, given that situation.

MR. TONE: Given that situation, why is that such

a combination necessarily obvious?

THE COURT: Yes.

MR. TONE: I believe the rationale, your Honor, is

that even though each of those elements may be performing a function it is known to perform, and which it can be expected to perform, the combination of those elements to produce a given result is not obvious. And I think that's the underlying rationale.

THE COURT: If, if the combination -- Let's put it this way: If the combination performs in a way that is completely expected, is that obvious?

MR. TONE: I think not, at least it is not obvious -- obvious to try is not fatal to a patent. It may be obvious to people skilled in the art that in attempting to achieve a given result, you ought to try combining a number of things. That is not, as your Honor may recall, enough to make the combination obvious.

Your Honor may remember a famous statement by Learned Hand in a case that I cannot cite except, I would have to go look up the citation, but he says in effect that all patents are, virtually all patents or inventions are made up of combinations of things, of gears and so on. He was

1 talking about a mechanical patent in that case. So he said  
2 the fact that all the elements are old does not mean that a  
3 combination patent is not valid.

4 And I think that that principle is important  
5 here. And it is the fact that if the combination that's com-  
6 bining the old elements in a way that will achieve the de-  
7 sired results is a matter of -- is the question -- the ques-  
8 tion of obviousness centers upon whether combining these old  
9 elements in a way that would achieve the desired result is  
10 or is not obvious to whether one is skilled in the art.

11 But the real point I seek to make is the fact  
12 that each of the elements is old is not the answer.

13 A second proposition that is useful to have  
14 in mind in considering this case is also mentioned by the  
15 Court of Appeals for the Federal Circuit in the recent Amer-  
16 ican Hoist and Derrick case. And that is that the determin-  
17 ation of the Patent Office on patentability is entitled to  
18 deference; its decision to issue the patent is entitled to  
19 deference with respect to evidence bearing on validity, which  
20 the Patent Office considered. It is not entitled to that same  
21 respect with respect to evidence which it did not consider.

22 But here in the re-issue proceedings, as your  
23 Honor knows, it considered a considerable amount of evidence  
24 in addition to that which was before it in the original pro-  
25 ceeding, including the MCS4 manual. And the American Hoist

1 points out that the determination of the Patent Office is  
2 entitled to considerable deference with respect to such evi-  
3 dence.

4 And finally, a point that the defendants con-  
5 cede, and that is that there is a presumption of validity and  
6 that the burden is upon the defendants throughout the case to  
7 prove invalidity by clear and convincing evidence.

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1 The defendants do not however concede that  
2 that principle applies to the date of reduction to practice.  
3 The contention seems to be that somehow with respect to that  
4 matter the burden is upon the plaintiffs.

5 I submit that it is not.

6 If the date of reduction to practice is a  
7 relevant factor on the issue of obviousness, then it is the  
8 burden of the defendants to prove that fact along with the  
9 other facts upon which obviousness or non-obviousness depends.

10 There seems to be no case addressing the  
11 matter of reduction to practice. But the Court of Appeals for  
12 the Federal Circuit has said a number of times recently that  
13 the burden of proving invalidity, the burden of proving  
14 obviousness is upon the defendants.

15 And that would clearly seem to apply to all of  
16 the elements that are necessary to prove obviousness.

17 I'm going to talk briefly about the facts  
18 relating to reduction of practice.

19 One fact is very clear from the evidence, and  
20 that is that on September 26, 1974, a working machine, Flicker  
21 machine, was shown to four people from Bally Manufacturing who  
22 came to Milwaukee to see it.

23 We have that in the testimony of Messrs.  
24 Nutting and Frederiksen; we have it in the testimony of  
25 Mr. Conroy, who is no longer employed by Bally and who is

no longer related to persons having positions as officers or owners of Bally.

In addition, we have some memoranda that were written soon after the event and written for a purpose having nothing to do with this litigation.

We have Mr. Bracha's memorandum, which is Plaintiff's 131, written on the subject of this so-called MCI model, the Flicker.

And he says:

"On September 26, 1974, Messrs. Britz, Conroy, Telnaes and I were present at MCI" -- that was actually Dave Nutting Associates; your Honor will recall that by that time Nutting and Frederiksen had moved out of MCI -- "to view a demonstration of an electronic version of Flicker.

"The external appearance of the MCI model was nearly identical with our conventional Flicker except for the LED displays. The LED displays had replaced our score counting assemblies and one digit of the credit assembly. From a player's point of view the play action could be considered identical."

1 We have it from Mr. Conroy that the men,  
2 during the demonstration, played the machine for some three-  
3 quarters of an hour, he estimated.

4 We also have in the record a memorandum of  
5 Mr. Telnaes, who also was a part of the Bally visiting group.  
6 And that's Plaintiff's Exhibit 87.

7 That memorandum, dated October 8, 1974, which  
8 is four days after Mr. Bracha's memorandum, says:

9 "The CMI Dave Nutting project was reviewed  
10 with Messrs. J. Britz, D. Conroy, F. Bracha. The  
11 meeting took place in Milwaukee on Thursday,  
12 September 27, 1974."

13 Thursday in the year 1974, I represent to  
14 your Honor, was the 26th, as a perpetual calendar will show.  
15 So Mr. Telnaes was mistaken by one day, on the date.

16 "The presentation," says he in this memoran-  
17 dum, "consisted of a showing -- of showing two  
18 identical two-player games. Minor feature differ-  
19 ences in bonus play was incorporated and demon-  
20 strated, but no real playfield difference evident  
21 by just visual inspection.

22 "Flicker pinball machines standing side by  
23 side. One was a standard Bally Flicker as in pro-  
24 duction today. The other one had a display field  
25 with light emitting diodes, numerical display for

1 game players and scoring rather than the standard  
2 wheel type displays. Otherwise the display using  
3 the same design.

4 "In the back of the machine was a table with  
5 all the removed relay mechanisms, stepper switches,  
6 and so on."

7 And then he goes on to describe what was seen,  
8 what the people said, that is, Frederiksen and Nutting, about  
9 the reduced cost of producing such a machine.

10 It says: "The designer, Jeff Frederiksen,  
11 claims he designed, developed and implemented the  
12 design model in about six to eight weeks. Although  
13 the idea had been reviewed and discussed for nine  
14 to twelve months prior to final design."

15 And then skipping some material, he says:

16 "Technically the CMI Flicker demonstration  
17 proves the savings capable by electronic technology  
18 in standard amusement games."

19 And then he goes on to talk about the possible  
20 application of that technology to other games.

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There is a third memorandum which is less explicit, but which I submit refers to the same demonstration, and that is the memorandum by Mr. Joe Robbins, who was chairman of an evaluation team. That's the evaluation team that was discussed during the examination of the witnesses. Mr. Robbins, speaking of a meeting attended by several Bally officers on December 17th, 1974, who included Mr. Robbins himself, and Mr. Conroy, says, among other things, "We discussed the solid state flipper in Milwaukee. Everyone who saw the game was extremely impressed." And then he goes on to say, "It was decided to make an offer for insurance purposes which Mr. Britz would propose, and we have heard nothing more of that."

So apparently, that decision was never implemented.

But there again is written evidence near the date of the event that that solid state flipper in Milwaukee was a working machine.

If it was a working machine, it had to have a program that had a jump table in it. And it had to have a program on which an instruction did not move off the page. So, it had to be a program that was a corrected version of the program that was submitted to the Patent Office and is in evidence, and which at the time we first introduced it, was not recognized as containing certain errors.



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1 Your Honor will recall the testimony about  
2 the errors. Mr. Frederiksen's testimony and Dr. Schoeffler's  
3 testimony all to the effect that although the program did  
4 contain errors and would not have worked in the form in which  
5 it was, it then stood, it nevertheless contained the princi-  
6 ples that would teach a person of ordinary skill in the art  
7 how to practice the invention. The changes needed were  
8 debugging changes which a person of ordinary skill could do.

9 One of those changes was necessarily the  
10 addition of the jump table, and that had to have been done  
11 if that Flicker machine was to have operated on September 26  
12 when it was demonstrated.

13 The noise testing. There is evidence about  
14 noise testing in the testimony of Messrs. Nutting and  
15 Frederiksen which your Honor will recall. There is also evi-  
16 dence in depositions which I am sure your Honor has not yet  
17 had an opportunity to read, there were two other men who  
18 testified about the testing of the Flicker. One was Paul  
19 Smith, who was the technician that worked with Frederiksen  
20 while the Flicker was being converted, and who actually did  
21 the wiring and who worked from the production drawing to  
22 assemble the machine and wire it and so forth. And Smith's  
23 testimony in his deposition at page 154 was to reaffirm the  
24 quotation from his affidavit filed in the Patent Office  
25 stating that, "prior to September 26, 1974, in connection

3  
1 with the project, I was involved in testing the converted  
2 Flicker pinball machine for static noise immunity with the  
3 Vandegraf generator. While performing this test I never  
4 observed any malfunction of the converted Flicker machine."

5 Then the deposition goes on by a question  
6 asking Mr. Smith to tell what he could about the kind of  
7 apparatus used. And he says, he then describes Magic Wand,  
8 and he describes the testing that took place. That appears,  
9 I am not going to go into, burden your Honor by reading all  
10 of the detail, but the substance of that testimony which  
11 appears at page 154 and 155 and 175 of Mr. Smith's deposition,  
12 Plaintiff's Exhibit 455, is to the effect that this testing  
13 took place and that it took place before the demonstration to  
14 the Bally people, which occurred on September 26.

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1 It is true, as Mr. Lynch pointed out, that  
2 when Mr. Nutting wrote to Mr. Conroy on October 18, 1974, he  
3 said, among other things, "The ultimate test in my mind -- the  
4 system can withstand a one-inch spark from a static generator."

5 That statement, I submit, does not state one  
6 way or the other when the test was done. He could be refer-  
7 ring to a test that occurred before the demonstration. He  
8 could be referring to a later, more severe test that was done  
9 after the demonstration. It doesn't really say one way or  
10 the other.

11 But, the evidence of Mr. Smith is very clear  
12 about when the testing was done, as well as the evidence of  
13 Nutting and Frederiksen. And your Honor saw those witnesses  
14 and will judge for himself and needs no help from me in judg-  
15 ing their credibility.

16 There is a fourth witness on testing, and he,  
17 too, is a deposition witness, and that is Mr. Winter. Mr.  
18 Winter was connected with MCI, the company that Nutting and  
19 Frederiksen were with. Before they left, MCI, your Honor will  
20 recall, decided to go out of the game business; they left.  
21 Winter was with the old MCI company and he was present on the  
22 premises because they rented some space from that old MCI  
23 company, Mr. Winter was there, he had observed testing during  
24 that period. He, too, describes the testing and says that it  
25 occurred prior to September 26, 1974. And his testimony is

1 at page 162 through 165 of Plaintiff's Exhibit 455.

2 The final point to be made with respect to  
3 noise testing is that if the machine had been susceptible to,  
4 vulnerable to internal noise created in the machine itself,  
5 it couldn't have been operated for 45 minutes during the  
6 demonstration, as Mr. Conroy testified it was.

7 If it was susceptible at least to noise  
8 generated by a nearby electromechanical game, it couldn't  
9 have been operated in the presence of the electromechanical  
10 game that stood beside it and which was used for purposes of  
11 comparison.

12 So that's additional circumstantial evidence  
13 that noise testing was done before that September 26 date.

14 Only a brief word, I think, is necessary about  
15 the errors in the evidence which we were, discovered during  
16 the trial, and which we brought to your Honor's attention with  
17 the filing that occurred during the recess. Those are un-  
18 fortunate and embarrassing; obviously, it is always embarrass-  
19 ing to find that one has presented incorrect evidence to a  
20 Court.

21 The testimony of Dr. Schoeffler and Mr. Freder-  
22 iksen demonstrated, I believe, that those errors were errors  
23 in recollection rather than deliberate, and also equally im-  
24 portant, were not material errors.

25 The program taught what would be necessary

1 to enable one skilled in the art to build the invention.

2 The schematic, which varied in some minor  
3 respects from the Flicker that was actually built, was suffi-  
4 cient, again, to teach one skilled in the art how to build  
5 the hardware portion of the machine, and the fact that some of  
6 the parts in the machine were manufactured after September  
7 26, 1974 is also immaterial because they were the same, they  
8 were simply new versions of parts that were in existence and  
9 available prior to that time. The machine had been played  
10 over the years as when it stood on the premises until the  
11 patent lawyers stopped people from playing it and put it, so  
12 to speak, aside and on ice, and no one knows when those part  
13 replacements took place, but they are the same parts, they  
14 are simply new, new parts, but they are the same kind of  
15 part that would have had to have been in the machine on  
16 September 26, 1974, if the machine was to work, and there  
17 can't be any doubt that the machine worked.

1 That concludes what I have to say on the  
2 subject of reduction to practice, your Honor.

3 We believe the evidence shows that the  
4 machine was reduced to practice on that date. And there  
5 isn't any contrary evidence. There isn't any contrary evi-  
6 dence that the differences between the program and the  
7 schematics and the machine were material. The witnesses say  
8 they were not material.

9 We therefore believe the reduction to prac-  
10 tice date of September 26, 1974 was not disproved by clear  
11 and convincing evidence, but moreover we believe that even  
12 if the burden were upon the plaintiff, the plaintiff has  
13 proved that date.

14 THE COURT: Refresh my recollection as to what art  
15 plaintiff seeks to avoid by the earlier date.

16 MR. TONE: I'm going to ask that Mr. Katz answer  
17 that question, your Honor, because it has to do with something  
18 he will be discussing anyway.

19 THE COURT: All right.

20 MR. TONE: And I recognize that it's improper to  
21 duck a Court's question --

22 THE COURT: No problem.

23 MR. TONE: -- but I think it would be better if  
24 Mr. Katz handled that question.

25 THE COURT: That's the advantage of having more

1 than one spokesman.

2 All right, fine. Thank you.

3 MR. KATZ: Your Honor, to answer your question  
4 directly --

5 THE COURT: I think you told me at the sidebar one  
6 time, and I've forgotten.

7 MR. KATZ: In the plaintiff's view there really is  
8 no prior art that would be avoided.

9 However, there are several issues that would  
10 be avoided in terms of other games.

11 There was an Atari Delta Queen placed in one  
12 location called the Asilomar Conference. There was another  
13 one placed in a hotel suite during a trade show in, I think,  
14 late October, early November of '74. And then there was  
15 Bally's own development which had already started.

16 And it's the plaintiff's view that neither  
17 the Delta Queens were reductions to practice, because there  
18 were five of them and the evidence we submit was clear that --  
19 and as the Patent Office found -- that they weren't reduction  
20 to practice.

21 There was not a reduction to practice in the  
22 invention of the Delta Queen because memos of Atari's files  
23 showed that they had inherent faults that made them incapable  
24 of field testing.

25 And there was a lot of deposition testimony



and a couple of specific internal documents from Atari.

With respect to Bally's own game, we submit that since the Bally work was actually based on the Frederiksen Flicker work, because it started immediately after Bracha went out with the other people to see the Flicker work, and there were conversations between Frederiksen and Bracha; and since the development of the Bally work was done by Bracha and Englehardt, we submit that that can't be prior art, that you couldn't use the work that was derived from the inventor from Frederiksen himself, against him to defeat his patent.

But in any event, if the September 26, 1974 date remains fast as a reduction to practice date for Frederiksen and Nutting, since the reduction to practice is prior to those three events, then those disappear as issues in this case.

As a matter of general review, a patent is presumed valid under 35 U.S.C. Section 282, and therefore a patent owner need not prove patent validity, according to Railroad Dynamics v. Stuckey, a case cited in our brief, a 1983 Federal Circuit case.

Moreover, the defendants must prove invalidity by clear and convincing evidence, which they generally admit.



LP 1 The burden of persuasion remains with the  
2 defendants until final decision, according to another recent  
3 Federal Circuit case, Stratoflex v. Aeroquip, also cited in  
4 our brief.

5 And according to still another recent, that  
6 is, 1983 Federal Circuit case, when the most relevant prior  
7 art has been considered by the Patent and Trademark Office,  
8 the burden of proving invalidity is, quote, "formidable".

9 When the Patent and Trademark Office holds  
10 the claims in this suit patentable in light of additional  
11 prior art during a re-issue proceeding, as occurred in the  
12 present case, according to the case American Hoist cited by  
13 Mr. Tone, the burden of proof of unpatentability becomes  
14 even more difficult to sustain.

15 And the presumption of validity should still  
16 be more difficult to overcome in the case at bar because the  
17 re-issue proceedings were vigorously protested.

18 A further comment to Judge Tone's statement  
19 that the burden does not shift to the plaintiff, even with  
20 respect to the reduction to practice of September 26, '74,  
21 a position asserted by the defendants, where they state that  
22 where a rule -- where the earlier reduction to practice in  
23 the Patent Office is made by a so-called Rule 131 affidavit  
24 or declaration, swearing back:

25 In this case, in this particular reissue

1 proceeding, although the evidence was initiated by a Rule 131  
2 affidavit or declaration, it was essentially an interparties  
3 matter.

4 The affiants' depositions were taken and  
5 there was a complete interrogation, a cross examination with  
6 respect to the entire question.

7 So with respect to this, the reason for any  
8 shifting of burden isn't present because it wasn't an ex  
9 parte proceeding on this point.

10 And in that regard the plaintiffs submit that  
11 the burden is as the Federal Circuit has stated, without ex-  
12 ception, and that is that it's the defendant that has the  
13 continuing burden of persuasion.

14 As discussed in Plaintiff's pretrial brief,  
15 filed on December 29 in this case, the statutory presumption  
16 of validity must be afforded a patent.

17 In this American Hoist case previously refer-  
18 red to, the CAFC goes on in great depth with respect to the  
19 presumption of validity and the effect of reissue proceedings  
20 on the presumption of validity.

21 In particular at page 1364 the Court said --  
22 this was a jury case --

23 "Should the case be tried again to a jury,  
24 however, it is clearly appropriate that the jury  
25 be instructed that because the Patent and Trade-

1 mark office has now held the claims in suit patent-  
2 able in light of the additional art discovered by  
3 Sawa" -- the defendant -- "its burden of proof of  
4 unpatentability has become more difficult to sus-  
5 tain a fact likewise to be taken into account by  
6 the trial judge."

7 And this is of course particularly applicable  
8 to the case at bar because the patent in suit is a re-issue  
9 patent, and the additional alleged prior art was thoroughly  
10 considered during the re-issue proceeding.

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2 other art that was presented in the trial was  
3 testified to by Dr. Schoeffler as being no more relevant, and  
4 in some instances less relevant, than the references cited  
5 before the Patent Office, and therefore this rule would apply.

6 Also, even in the listing of prior art in the  
7 Section 282 notice, the two basic prior art references, the  
8 MCS 4 manual and that Intel advertisement, those were referen-  
9 ces specifically considered by the Patent Office and even  
10 noted here in the defendants' argument.

11 In still another case, recent case, RCA v.  
12 Applied Digital Data Systems, the CAFC held, "and I quote,  
13 that:

14 "It is incumbent on a District Court to  
15 indicate on whom the burden of persuasion was  
16 placed and what quantum of proof was required to  
17 establish disputed facts. An error in either  
18 respect may require reversal."

19 And the Court goes on to say:

20 "The statutory presumption of validity imposes  
21 the burden of persuasion on one who attacks the  
22 validity of a patent."

23 He said:

24 "In this case the District Court applied the  
25 view of some circuits that, where art more

relevant" -- as distinguished from this case where we submit it was no more relevant or less relevant -- in the case I'm referring to, in the RCA case, they said -- "where the art is more relevant than that considered by the examiner made of record, the presumption of validity is destroyed."

That is, some circuits have considered that.

However, the CAFC says:

"This Court" -- CAFC -- "has squarely rejected that view."

So it goes on to say, at page 6:

"In sum, the position of this Court is that the burden of persuasion on invalidity must under the statute remain at all times on the party asserting invalidity, although that burden may be carried more easily by evidence consisting of more pertinent prior art than that considered by the examiner. Further, the facts establishing anticipation and/or obviousness must be proven by clear and convincing evidence."

As the Court is aware, the reissue patent was granted only after a heavily-contested proceeding in the Patent Office, including a re-examination by Examiner Hum after a petition filed by the defendants was granted, where

1 a particular reference hadn't been considered.

2 And the examination went further with the  
3 examiner requiring more information.

4 A tremendous number of depositions had been  
5 taken and documents supplied in connection with the issues  
6 that were raised.

7 And then after the examiner allowed the case  
8 again, there was a further review under the Rule 56 pro-  
9 ceedings, reviewing the record for any clear error by the  
10 assistant commissioner's office.

11 In reviewing a patent held valid by the  
12 Patent Office in a fully contested reissue proceeding, such  
13 as this one, another Judge of this district in National  
14 Tractor Pullers Association v. Watkins, cited in our pretrial  
15 brief, has held that, and I quote:

16 "This Court will not find contrary to the  
17 Patent Office absent a thorough conviction sup-  
18 ported by clear and convincing evidence that the  
19 Patent Office decision was erroneous."  
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LP 1 In the lengthy proceedings before the Patent  
2 Office, there have been numerous findings. Key rulings are  
3 found in Examiner Hum's paper number 145 which was the subject  
4 of considerable testimony and is attached to the pretrial  
5 brief.

6 Also, the commissioner's office requirement  
7 for information dated June 2, 1983 was another attachment to  
8 the pretrial brief, and the commissioner's office action  
9 dated August 25, 1983, which was attached also to the plain-  
10 tiff's trial brief.

11 In connection with those findings and with  
12 reference to some of the material presented by Mr. Lynch in  
13 connection with the papers initially filed by the applicants  
14 to show a conception, there were affidavits with attached  
15 drawings, your Honor will recall, that were reconstructed  
16 drawings by Frederiksen of what was on a blackboard and some  
17 other material, a number of affidavits; those materials were  
18 submitted initially by the applicants to prove a conception  
19 date in December, 1973, which was believed to be the earliest  
20 conception date.

21 Examiner Hum, however, during the proceedings  
22 initially granted to the plaintiffs the benefit of that  
23 conception date. However, as this noise question became an  
24 issue, Examiner Hum said if the noise problems in actually  
25 making this thing were routinely solvable, and he had a number

2  
1 of types, he said then the plaintiffs were entitled to that  
2 conception date in December, '73. However, if the noise  
3 problems were not solvable routinely by ordinary engineering  
4 skill, then the applicants were not entitled to that con-  
5 ception date because they hadn't done enough work.

6           So, as the facts evolved, particularly with  
7 respect to the Atari-Cyan development, and Cyan was a re-  
8 search group that Atari maintained up in Grass Valley up in  
9 the mountains, they had done, as your Honor has heard, the  
10 El Toro project was their earliest one where they took a  
11 Bally El Toro electromechanical and converted it into the  
12 microprocessor-controlled system, which was not a stand-alone,  
13 it had that blue Intellec coupled with a cable to the machine,  
14 and then later they did the five Delta Queen games, and then  
15 the last thing they did was the Superflight up there, which  
16 was a Williams game that they converted.

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2 Now, as all that evidence started to come in  
3 from depositions of those Atari people, and with affidavits  
4 and other depositions of Bally people and so on, the examiner  
5 found that the noise solution, the problem of making this  
6 thing work, was not routinely solvable.

7 And while there is no specific ruling with  
8 respect to the conception date, presumably the plaintiff  
9 would not have that conception date, but would have based on  
10 that finding that it was, that the noise was not routinely  
11 solvable, was entitled to his reduction to practice date of  
12 September 26, '74, but that meant that the work of Cyan,  
13 that is, the El Toro and Delta Queen failed completely as  
14 prior art because there was no evidence that they were  
15 actually reduced to practice. Every one was considered with  
16 noise testing. Noise testing was part of the routine for  
17 determining a practical pinball machine, which was established  
18 in the Patent Office; and everyone here, I think even in this  
19 case, Mr. Goldenberg noted in his opening remarks the noisy  
20 environment of pinball machines, and that they were inherently  
21 noisy, electrically noisy devices.

22 In any event, it turned out that the examiner  
23 found that the El Toro failed the noise tests and the Delta  
24 Queen also had noise problems and other problems and, there-  
25 fore, they were not reductions to practice and not being re-  
ductions to practice, they were attempts and failures or

2  
1 abandoned experiments and they no longer were a prior art  
2 cited or citable against the applicants.

3           There has been a large amount of evidence  
4 introduced in this case through deposition testimony which  
5 your Honor may not have had an opportunity to consider yet.  
6 But, and the defendants have not addressed that in any  
7 particular way, but those deposition line designations and  
8 then recent counterdesignations dealing with that subject are  
9 primarily with the work done by Atari and by Ramtek, another  
10 company that was relied on by the defendants as -- these were  
11 asserted initially to be alleged prior -- they were prior in-  
12 ventions or simultaneous, independent inventions, but they  
13 turned out to be attempts and failures and ended up proving  
14 non-obviousness rather than obviousness.

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And perhaps on the question of obviousness, it would be better to -- we have some charts prepared, and I submit that the best evidence of what would have been obvious to a person of ordinary skill in the art at the time the invention was made, let's take 1974, was what people actually in the art were doing; that is, we could speculate as to what would have been obvious to various people, but we, in this case, there has been so much discovery taken on this question that we actually have, we actually know what the people in the art were doing.

And if we look at the pre-invention activity, this is the original work done by Frederiksen and Nutting in November, December, '73, and then the September 26, '74 Flicker demonstration over here; at Atari, which was considered by the examiner to be experts in the electronic game technology, and particularly at their research facility in Grass Valley, which is not a routine engineering type of facility in the normal, according to the testimony, according to the normal chain of events, original designs, creative work was done at Cyan as Grass Valley, and then ultimately if they were going to do, put it into production, it would go down to their main facility in Las Cados, and later became Sunnydale, California, and there were different people.

In early '74, actually in about December, '73, Grass Valley was instructed to determine the feasibility of

1 a solid state pinball machine, the feasibility of it. And  
2 there was no specification as to what type it should be.

3 And the people at Atari, at Grass Valley, Mr.  
4 Mayer and others there, considered various approaches, and  
5 one of the approaches was the so-called TTL that we have  
6 talked about approach, which is a non-microprocessor, discrete  
7 logic, solid-state system using, may use transistors or inte-  
8 grated circuits, but it does not use a computer. And the  
9 logic is dedicated for each part in the machine, as Dr.  
10 Schoeffler discussed, rather than having a central logic  
11 that time shares essentially with everyone.

12 And that was done, there was some paperwork  
13 done on that and so on. And eventually they started work on  
14 the El Toro phase. And in June, May or beginning of June or  
15 so, the work stopped on the El Toro, June, '74. And then in  
16 September, five Delta Queen pinball machines were done. And  
17 those, those were, both the El Toro and the Delta Queen were  
18 found to have inherent, well, at least the Delta Queens were  
19 found to have inherent faults making them unsuitable for  
20 field testing. And in particular, there was an exhibit from  
21 Atari's file, Plaintiff's Exhibit 129 and Plaintiff's Exhibit  
22 130, where the Cyan people writing to the engineer, Al Alcorn,  
23 who was the chief engineer over at Atari, said that, "Various  
24 things about power outages or kids playing with the on and  
25 off switch can send the machine into non-scanning states or

1 spurious game counts. The software cannot cope with stuck  
2 switches, so everything bombs when this happens. And bombing  
3 means that the computer may go off into an unpredictable state  
4 and then may stop working. This often leaves the machine in  
5 an unplayable state."

6 in the early 1970s.  
7  
8 flicked a switch and the machine  
9 connected -- and the  
10 electrical noise, and the  
11 of toing. And the machine

12  
13 suspected, the game  
14 practice. It was the  
15 game. The Delta game was

16  
17 in April of '75, and the

18  
19 when Atari was going to

20 Bob Johnson's name and the  
21 game previously and the

22 going to go into the game  
23 design. And the game was

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In any event, the El Toro earlier had been tested for noise by one of the Atari technicians, Michael Rogers, whose deposition we took right at the beginning of the trial when we flew out; he had put in an affidavit -- we had an affidavit in the Patent Office, and then we put it in the evidentiary form, but he performed essentially what turned out to be one of the same tests that was done on the Flicker, and that is, he, he with others around him at Cyan, conducted -- put electric drill in the machine to generate electrical noise, like, similar to an electrical razor type of thing. And the machine malfunctioned.

Based on that kind of evidence that was submitted, the Patent Office found it was not a reduction to practice. It was, the El Toro was never a self-contained game. The Delta Queen was not a self-contained game.

And ultimately, they worked on the Superflight, in April of '75, that work was completed.

And then finally, when, in November of '75, when Atari was going to go into the pinball machine business, Bob Jonesi, a name you have heard, who also worked for Ramtek previously and now was working for Atari as they were going to go into the pinball machine, who was a pinball game designer, went up to -- I don't know if I misspoke. Delta Queen was a self-contained game, but El Toro was not.

Jonesi went up from the main engineering

2  
1 facility to the Grass Valley facility at Cyan, and they  
2 picked up the Superflight game and they brought it down to  
3 the engineering facility and they tested it and it didn't  
4 work. It was rejected completely.

5 And then Atari, when they brought out their  
6 first -- they went into production, went in production of  
7 their first pinball game, called the Atarian, their first  
8 coin-operated microprocessor pinball games; that system did  
9 not used the claimed invention. And that was a position that  
10 was taken in the Patent Office, and it is a position that we  
11 maintain here. That uses a different system.

12 We have talked about matrix multiplexing of  
13 switches and some displays. And that game did not use matrix  
14 multiplexing of the switches. It used, I believe what  
15 Dr. Schoeffler referred to as some sort of a tree logic,  
16 which could perhaps broadly be considered a form of time  
17 multiplexing. It was not prior art; and is not in any way  
18 prior art to the invention of this case, in this patent.

19 And if we were to construe the claims more  
20 broadly, and if we assumed that even claim 45 wasn't restric-  
21 ted to matrix multiplexing, but would encompass any type of  
22 multiplexing, the Atarian would not become prior art to the  
23 claim; in fact, I don't know that it would change anything.

24 But, it wasn't the position of the inventors  
25 here that they had invented that.



LP 1 So, the position of the inventors is that they  
2 had invented matrix multiplexing system, that's what was  
3 specifically disclosed in the patent, and that's what every-  
4 one considered it to be during the Patent Office proceedings,  
5 both in the proceedings with respect to the original patent  
6 and with respect to the re-issue patent.

7 THE COURT: Excuse me, I am not sure I followed  
8 what you just said. You are saying that Nutting and Frederic-  
9 sen --

10 MR. KATZ: Their position is that their invention  
11 is matrix multiplexing.

12 THE COURT: Is that what Dr. Schoeffler said?

13 MR. KATZ: Yes. It is certainly consistent with  
14 what they said. What we are saying is that the invention as  
15 defined by the claims, and as is disclosed in the specifi-  
16 cation, and as has been treated by everybody up until this  
17 point, has been that we have a micro --

18 THE COURT: What was new about matrix multiplexing?

19 MR. KATZ: It had never been used in a pinball  
20 machine before.

21 THE COURT: In a pinball, all right.

22 MR. KATZ: We had a microprocessor-controlled,  
23 microprocessor-controlled pinball machine that under the  
24 control of the microprocessor used a matrix multiplexing  
25 system that's been described in order to sense, you know, the



1 disenabling language, cyclically and sequentially to sense  
2 the switches in a pinball machine and one or more of the dis-  
3 plays; that is, the digit displays, the lamps, or both; and  
4 in doing that, in trying to do it, which was something that  
5 the Atari people at Cyan tried to do, they found that they  
6 were taking a system which was already very electrically  
7 noisy in terms -- and that was very hostile to the micro-  
8 processor, which had to do 100,000 steps per second--

9 THE COURT: You are including the computer program?

10 MR. KATZ: Yes, right.

11 THE COURT: In your definition. All right, then I  
12 misunderstood what you said. You aren't saying that it was  
13 simply matrix multiplexing of a pinball machine; you are say-  
14 ing that the hardware and the software combination.

15 MR. KATZ: Right. Well, I was going to get to  
16 that.

17 The problem is, is that what they did and  
18 what other people didn't do was that Frederiksen was able to  
19 recognize inherently in the system that he designed, he used  
20 certain hard -- as Dr. Schoeffler testified -- certain hardware  
21 noise prevention systems, okay, schemes, hardware, whatever,  
22 he had different things that he used, and he didn't try to  
23 eliminate all the noise. What he did was he reduced the level  
24 of noise to a level which he could then handle with the soft-  
25 ware.

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THE COURT: Now, are all those things that he

used to do that part of the invention?

MR. KATZ: Yes, the concept is part of the invention, as defined in the means plus function language of the claims under Section 112 of the statute. We would like to speak -- he only used one way of doing it, but there would be a lot of ways of doing it. But the concept of taking the hardware and reducing the noise on the one hand so that you can use a software noise immunity system so that when you put it together, it would work as a practical pinball machine.

Now, one of the problems that was fighting against their being successful was that matrix multiplexing is inherently noisy, because you keep pulsing things with relatively higher voltages, particularly lamps that are at a voltage that's a power function, higher than the rated value of the lamp, you are pulsing through the system and that causes a lot of electromagnetic radiation which induces, as Dr. Schoeffler discussed, noisy signals, and he was talking about signals five billionths of a second in duration, very low level, short signals.

1 But which to a microprocessor which has to do  
2 one hundred thousand instructions per second.

3 If you have five-billionths of a second spike,  
4 pulse, or noise, on a particular wire going into the micro-  
5 processor, when it shouldn't be there, and the microprocessor  
6 sees it, it will read it perhaps as a signal. And that's --  
7 that may be the end.

8 It may read it as a particular number that  
9 it shouldn't be, and then that would be the end. That may  
10 do what they say, bomb, it goes over into sort of never-never  
11 land, and then it becomes uncontrolled.

12 So working with a system that was inherently  
13 hostile to the pinball machine environment, where you had  
14 the solenoids that were high current devices, all these long  
15 wires that Dr. Schoeffler talked about: All these things  
16 were the kind of thing that would make you think you shouldn't  
17 put a microprocessor in there.

18 And people tried it.

19 Now, these people did make that mating that  
20 Dr. Schoeffler talked about, and in fact they didn't work.  
21 And there was extensive testimony taken of Mr. Cox, who was  
22 the programmer for the El Toro work.

23 And interestingly enough, he talked at  
24 great length, and he testified about what he did, and so on.  
25 He didn't contemplate -- they had noise

1 problems. He said they never cured the noise problems.

2 And that is an indication to me of level of  
3 skill. And I don't know whether that's a low level of skill  
4 or a high level of skill.

5 But the experts in electronic gaming, the  
6 electronic game experts at Atari, did not and could not solve  
7 the problems.

8 Their solution was not to use matrix multi-  
9 plexing for the switches. And ultimately Atari went out of  
10 the pinball machine business several years later, I believe.

11 But in any event, their systems did not use  
12 the invention.

13 Turning to Ramtek, which was another alleged  
14 prior art development, prior to September '74 Howell Ivy, who  
15 was vice president of engineering and the hardware engineer --  
16 he would be considered, I believe, what you would call a  
17 digital electronics engineer -- he did a paper design on a  
18 non-microprocessor electronic pinball, also a so-called T-  
19 squared L, TTL system with discrete logic.

20 Then in September of '74 at about the same  
21 time generally of the Flicker demonstration, they first  
22 started to put together a project to do a microprocessor  
23 pinball project.

24 And, interestingly enough, they had three  
25 different people working on the project. And this goes to

3  
1 the question of who were the people in the art.

2 They had Bob Jonesi, who was their pinball  
3 game designer, more or less electromechanical type of pinball  
4 game designer, and he designed the playfields.

5 They had Howell Ivy, who was the digital  
6 electronic designer, who was going to design the hardware  
7 system.

8 And then they hired a software, a microproces-  
9 sor expert, a fellow by the name of Ray Holt.

10 And Ray Holt had previously been teaching  
11 courses to engineers for Intel, who was one of the early  
12 microprocessor designers and manufacturers.

13 And so there they had what they considered an  
14 expert team.

15 They built a game called Lucky Dice. And  
16 Lucky Dice, in about April of 1975, was a pinball machine that  
17 was cabled externally to the -- to what they called a card  
18 cage.

19 It was a computer, it had all the computer  
20 cards inside of, you know, a box, a large -- a metal cage.

21 And they were never able to make a stand-  
22 alone system. They said the time they tried to go, put the  
23 microcomputer system inside the pinball machine, which they  
24 tried once, it wouldn't work.  
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And again, not only did they never make a practical pinball machine -- which, according to Mr. Jones, this never worked, this never worked well enough to test it, and there's extensive testimony with respect to that game -- but they tried to interest other companies in the game and found that every major pinball machine manufacturer, Williams, Gottlieb and Bally, refused, you know, or indicated no interest, and specifically indicated that they were very sceptical about this system.

Mr. McEwan, who was the president of Ramtek, testified at some length -- and those depositions are in the record in this case -- about the scepticism he encountered when he tried to peddle this system to the pinball machine industry.

In July 1975 the Lucky Dice project was completely abandoned by the Ramtek Company, which is I believe still in business. But that was the end of their pinball machine endeavors.

So looking at this time period, you have what I would consider to be experts in game -- in the game design field, the digital electronic area, and in microprocessors, with Ray Holt being a teacher of courses in those, and yet an inability to actually make a practical working pinball machine.

And the Patent Office found, after all this

25

1 evidence went in, that this was also not a reduction to prac-  
2 tice.

3 For purposes of the record this particular  
4 chart is PX327, marked Plaintiff's Exhibit 327.

5 Subsequently -- going back, even if we look  
6 into the pinball machine industry itself -- this industry  
7 we're really talking about was not the pinball machine in-  
8 dustry.

9 Atari and Ramtek were -- you would consider  
10 probably electronic game industry, Atari being an expert in  
11 the primarily video game field.

12 Looking at the pinball machine industry which  
13 had been using these electromechanical games for about thirty  
14 years with very little change in the basic electrical systems,  
15 there was certainly a quest or desire. People were looking  
16 for solid state systems.

17 Bally had, in 1971-72, had some people from  
18 Texas Instruments do a design of a non-microprocessor game  
19 called Big Valley, and it was rejected as not being practical.

20 Gottlieb, who was at the time probably the  
21 leading company in pinball machines, in September '72 to  
22 June '73 had hired a Ph. D. electrical engineer by the name  
23 of Hoopis, to design solid state pinball machines. They were  
24 not microprocessor pinball machines.

25 You may note that I have a color coding here  
of. the red is sort of indicates work on microprocessors that



1 was generally not successful; blue indicates non-microprocessor  
2 solid state systems, referring to Plaintiff's Exhibit 327; and  
3 I've indicated generally the green as the successful systems  
4 both for the inventors and for the final system of Atari that  
5 really didn't use the invention.

6 We used the same color designations here in  
7 this chart with the pinball machine industry. This one is  
8 marked PX383.

9 So we have Gottlieb from '72 to '73 working on  
10 solid state. But eventually all of his work was rejected by  
11 management as not being practical.

12 The Flicker demonstration of September 26,  
13 '74, about which Mr. Tone spoke, was viewed by a number of  
14 Bally people.

15 On October 13, '74, Bally immediately com-  
16 menced the start of a project for the design of a micro-  
17 processor pinball machine.

18 The project that Bracha and Engelhardt were  
19 on -- they had previously been working on a slot machine  
20 project, an electronic slot machine project up to that point--  
21 but as soon as the Bally people saw the Flicker system, they  
22 immediately reacted and they reassigned the work of Bracha  
23 and -- that Bracha and Englehardt had been doing, they re-  
24 assigned that to another group in the company, in fact out  
25 in Reno, and they immediately started Bracha and Englehardt



1 on doing a project for the solid state pinball machine.

2                   Going down -- back to Gottlieb, Gottlieb hired  
3 an electronic, digital electronic person, a fellow by the name  
4 of Edwall, who had a background in digital electronics.

5                   And he was assigned the job of making -- de-  
6 signing a solid state pinball machine for Gottlieb.

7                   He previously had worked with microprocessor  
8 technology, but he didn't use microprocessor technology.

9                   He went through a tedious development of  
10 eight different non-microprocessor based electronic pinball  
11 designs, and every single one, during this period from  
12 November '74 through September '75, every single one of his  
13 games was rejected by management.

14                   He tried various types of discrete, non-  
15 microprocessor logic systems, various types. And all were  
16 rejected as not being practical, mostly for technological or  
17 cost reasons.

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ons 1 Then in September '75 Gottlieb started their  
2 in-house microprocessor project, and then in late '75 and  
3 early '76 Gottlieb had Rockwell manufacturing -- Rockwell  
4 International, one of the defendants, and also National  
5 Semiconductor do evaluations of prototype systems.

6 And they decided to go along with the Rockwell  
7 system.

8 In June of 1976 Gottlieb abandoned its in-house  
9 program and decided to stay with the Rockwell, which was an  
10 established semiconductor company, not having the in-house  
11 capability to do that work.

12 And eventually in late '77 they brought out  
13 their first coin-operated microprocessor pinball game, which  
14 is the Cleopatra, which is one of the games here in the court-  
15 room charged with infringement.

16 And of note is that during the process of  
17 this development work between Rockwell and Gottlieb, there  
18 were tremendous problems encountered, many of which we heard  
19 Professor Kayton relate that were brought to light in the  
20 Patent Office.

21 There were in fact four volumes of materials  
22 relating to problems that Rockwell encountered.

23 And in fact, the deposition testimony will  
24 show that there is an entry of Mr. Edwall at Gottlieb in his  
25 notebook that says, "Send a Bally Freedom" -- this was right

2  
1 after the Freedom came out, which was Bally's first commercial  
2 game using the invention in December 6, '76 - - and the  
3 entry in the Gottlieb notebook said, "Send Rockwell a Freedom  
4 to show them what we want."

5 Ultimately the Freedom was sent back from  
6 Rockwell to Gottlieb.

7 Williams, another major pinball manufacturer,  
8 in early '75 started an in-house project for designing a non-  
9 microprocessor pinball machine, also T-squared-L system, TTL  
10 system.

11 And then going into the fall of '75 they stoppe  
12 their in-house project, and they hired three outside sources  
13 to do a microprocessor pinball machine system and a non-  
14 microprocessor pinball machine system.

15 They didn't know what to do. They hired  
16 National to do a system, they hired Rockwell to do a system,  
17 and then they hired Seeburg that had electronic engineers on  
18 its staff.

19 Then in November of 1976, just prior to  
20 November of '76, a fellow by the name of Mike Stroll was hired  
21 by Williams, and he was the engineer in charge of the national  
22 project that was working on the microprocessor system for  
23 Williams.

24 And when he was hired he rejected all three  
25 of the outside projects, and he started by hiring a new group

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1 of engineers saying that the other engineers were really --  
2 that the engineering people that were there weren't able to  
3 handle this kind of technology.

4 He rejected all three of the outside projects  
5 based on technological reasons, lack of ability to duplicate  
6 their systems, too critical in quality, and various other  
7 problems that they had.

8 And he started his new in-house project,  
9 which was with his advanced technology team.

10 And then he reviewed, the depositions will  
11 show, several microprocessor pinball machine games. And one  
12 of the games that he analyzed with his team was the Fireball,  
13 which we heard Dr. Schoeffler talk about and Mr. Frederiksen.

14 Fireball was a microprocessor-based pinball  
15 machine designed by Frederiksen for the Bally Midway subsidiary,  
16 and it was a home game. And that was first brought out on the  
17 market by Bally in August 24, '76.

18 Stroll had one of those games over at  
19 Williams, and that was analyzed, particularly, he said, with  
20 respect to, I believe, to the multiplexing of the lamps.

21 He also had a Bally Night Rider, I believe,  
22 which was I think the second Bally solid state game that came  
23 out using the invention.

24 The Williams witnesses testified on deposition  
25 and of record now in this case, that they, when asked the

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1 question, you know, "Why were you analyzing these games?"  
2 the answer was, "We always analyze, everybody analyzes  
3 competitive games."

4 But the game that they had was a consumer,  
5 a home game, not a competitive game. Because Williams was not  
6 in that -- not in the consumer business.

7 Eventually, November 10, '77, Williams came  
8 out with their first coin-operated microprocessor based  
9 pinball game called Hot Tip.

10 Chicago Coin in January of '76 designed a non-  
11 microprocessor based, that is, a TTL pinball game system  
12 which was not commercialized.

LP 1

2 And then early in '77, late '76, early '77,  
3 Chicago Coin went into bankruptcy. And then early in '77,  
4 Stern Electronics purchased Chicago Coin. And from April to  
5 June, '77, Stern copied the Bally microprocessor pinball  
6 machine. And late '77, there was the first sale of the  
7 Stern coin-operated microprocessor based pinball machine.

8 And then October 5, 1978, Stern took a license  
9 under the patent which had produced approximately a quarter of  
10 a million dollars in royalties.

11 The Stern Chicago Coin sales went from prac-  
12 tically nothing to very significant sales in the industry  
13 after they copied the Bally machine.

14 Referring to Plaintiffs' Exhibit 327, the  
15 plaintiffs submit that the work that Nutting and Frederiksen  
16 did in connection with the Flicker essentially revolutionized  
17 the pinball machine industry. The work that originally  
18 started in November, '73 in Milwaukee and the September 26,  
19 '74 Flicker demonstration to Bally eventually led to everyone  
20 going into, all the major pinball machine manufacturers, going  
21 into the microprocessor based system, where they all used,  
22 other than Atari, who had rejected the complete matrix multi-  
23 plexing system, the others all used the system that Bally used  
24 and basically the system covered by Claim 45 to 49 and 95 that  
25 are in issue in this case.

THE COURT: Let's take a brief recess at this time.

(Brief recess)

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MR. KATZ: Your Honor, as shown by Exhibits 381-B and 470, commercial sales figures and the chart that Mr. Nieman testified about, in about two years, from 1976 through 1978, the microprocessor-based pinball machines that are the subject of this suit and the plaintiffs displaced the entire market of pinball machines. Essentially all electromechanical pinball machines were displaced and Bally, from 1974 through -- it should be from 1976 through 1982 sold over \$400 million worth of pinball machines. And I believe that the defendants' combined sales were comparable. Bally went from roughly a third position to first position in the market during this period.

THE COURT: Refresh my recollection, Mr. Katz. Did Dr. Schoeffler testify that the '441 patent reads on the Freedom and the other Bally commercial machines?

MR. KATZ: Yes, your Honor, he testified and he specifically went through a large schematic diagram with a part-by-part to show that the Freedom system, the Freedom game of Bally's and the Fireball, which was the home game, were covered by the claims. And he also read the claim on Flicker and he read it on its own, on the disclosure itself of the patent.

THE COURT: How does the Bracha patent differ from the '441 patent in commercial terms? That's not the right question, but there is a contention by the defendants



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1 here that what is being sold is something manufactured  
2 according to the Bracha patent rather than the '441 patent.

3 MR. KATZ: Well --

4 THE COURT: By the defendants. I said plaintiffs,  
5 I meant defendants.

6 MR. KATZ: One difference is that the Flicker  
7 machine and the system that is specifically disclosed in the  
8 '441 patent is an Intel microprocessor, comes from Intel and  
9 it is their particular set of chips. The Freedom --

10 THE COURT: What was the improvement in the Bracha?  
11 I have read the claims, but I can't figure it out.

12 MR. KATZ: In the Freedom, the system used, it  
13 used the basic multiplexing for the switches and for the  
14 digital displays. The switches on the playfield and the  
15 digital displays. But it did not use the matrix multiplexing  
16 for the lamps. That was one difference from the patent.

17 And the patent says, this is the Bracha-  
18 Englehardt patent, --

19 THE COURT: Yes.

20 MR. KATZ: -- that patent says that there is  
21 actually some advantage in not multiplexing the lamps on the  
22 playfield; in other words, not using a matrix multiplexing  
23 for the lamps themselves in connection with the reduction of  
24 radiofrequency interference, not, you know, emitting from  
25 the machine because of all the pulse currents that have to



3  
1 go through the lamps.

2 There was another aspect to the Bracha  
3 patent, too, I believe, and that is that the interfacing  
4 chips, the semiconductor segregated interface chips between  
5 the circuits that are connected to the switches and the  
6 digital displays and the lamps that connect those components  
7 to the microprocessor, those interfacing circuits are sepa-  
8 rated in a way so that all the lamps are connected in one  
9 section, all the switches are connected in another section  
10 and all the digital displays are essentially connected in  
11 another section, so that a service, for ease of servicing,  
12 so that a service person that goes in and has to repair the  
13 machine can actually determine, I guess trace wires and  
14 determine how to repair the machine.

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ine 1                    So there was a simplicity, there was a certain  
2                    aspect of simplicity. And there was the reduction in radio-  
3                    frequency emission that occurred.

4                    But the claims that are in the '441 patent,  
5                    the Nutting and Frederiksen patent, dominate, essentially they  
6                    dominate the Bracha and Englehardt patent.

7                    THE COURT: What was it that made Bracha and  
8                    Englehardt patentable over Frederiksen?

9                    MR. KATZ: The Patent Office allowed the -- the  
10                    Patent Office first cited Nutting and Frederiksen as prior art  
11                    against it and considered the rearrangement of the circuitry.  
12                    The claims in the Bracha-Englehardt are very specific to  
13                    their particular kind of system that's used in that machine.  
14                    And it was considered patentable to make that arrangement,  
15                    in other words, to make the arrangement in a way that was  
16                    not -- that was easy to service and not multiplex the lamps  
17                    and still have an operable pinball machine.

18                    THE COURT: Now, do the Bally commercial games use  
19                    that arrangement?

20                    MR. KATZ: The Bally commercial games use that  
21                    arrangement, the Bracha-Englehardt. And according to testi-  
22                    mony from Professor Kayton, where he spoke, he testified  
23                    about the examiner's findings relating to commercial success,  
24                    in attributing commercial success of the Bracha system to  
25                    the Frederiksen, Nutting and Frederiksen patent, he said that

1 the examiner, who you recall took on his own initiative to  
2 include that play meter survey in his final action, where  
3 it was in connection with one of his findings, he noted the  
4 commercial pinball machines that were being sold by Bally,  
5 the coin operated pinball machines, he noted that. He was  
6 aware of the claims in the Bracha case and he was also aware  
7 of the claims in the Nutting case.

LP 1 And he was also aware of what the actual sys-  
2 tems looked like. Because the service manuals with the schem-  
3 atic drawings had been submitted in those cases.

4 The Bracha case had in its file history  
5 schematic diagrams and programming for the Bracha and Engle-  
6 hardt system, and the Nutting and Frederiksen had in it the  
7 programming and the hardware system for that patent.

8 And then in the reissue proceeding the Bally  
9 coin-op commercial game manuals were sent in to the Patent  
10 Office.

11 So Examiner Hum had all of these things.

12 And the plaintiff submits that the Nutting  
13 and Frederiksen patent was the pioneer patent, the breakthrough  
14 patent in this system; that Nutting and Frederiksen was an  
15 improvement on it, and that the examiner, who was in a position  
16 to know this, attributed the commercial success to the basic  
17 invention, the basic breakthrough invention.

18 I'm sorry if I misspoke. Bracha and Engle-  
19 hardt was the improvement on the Nutting system. The Nutting  
20 system has the claims to the broad concept of this matrix  
21 multiplexing concept under microprocessor control.

22 THE COURT: If you get an improvement patent,  
23 though, you are entitled to the full utilization of the patent  
24 in the marketing of the product. Is that right?

25 MR. KATZ: Yes.

1 THE COURT: Obviously you're not required to split  
2 with the basic patent.

3 MR. KATZ: No. And Bally owns both patents in  
4 this case, --

5 THE COURT: Right.

6 MR. KATZ: -- so it turned out that they acquired  
7 both.

8 I don't know if I mis-spoke: the examiner  
9 attributed the Bally commercial success to Nutting and  
10 Frederiksen.

11 THE COURT: That's what I heard you say.

12 MR. KATZ: If you look at the scope and content  
13 of the prior art, which is one of the elements of the Graham  
14 versus John Deere test, we could see that all through the  
15 prosecution of this case, from the very beginning, there were  
16 over 70 references submitted to the Patent Office, patents  
17 and publications, there was never an anticipatory reference.

18 There wasn't anything really very close.

19 The basic manual was the MCS4 manual, which  
20 was a particular manual that came with the microprocessor.

21 And every article that referred or had any  
22 mention to using a microprocessor in a pinball game, would  
23 fail to show how you actually would do it.

24 The testimony that was taken of Dr. Tai, who  
25 was at the time an engineer at -- he was a Ph. D. engineer  
at Intel, and was one of the designers of the MCS4 system.

1                   And he said that these articles were just  
2 articles that people wrote who were dreaming and trying to  
3 promote things, and they were just essentially puffing, that  
4 they really had never seen a game.

5                   He, Dr. Tai, testified that he went out  
6 early -- and he's listed, I think, as one of our corrobor-  
7 ating witnesses, Phil Tai, corroboration of the conception  
8 that we didn't get in December of '73 -- but he was out  
9 early and talked to Frederiksen.

10                   And then he testified about his conversations  
11 with Ray Holt. Ray Holt was, if you recall, your Honor, the  
12 Intel microprocessor expert at Ramtek that was on that  
13 project.

14                   And as a result of the testimony that was  
15 put into the Patent Office, the examiner considered that Holt  
16 had actually derived the idea, the broad idea, from Frederik-  
17 sen through Dr. Tai. And felt that, you know, that develop-  
18 ment for -- among other reasons, wasn't relevant because it  
19 wasn't an independent development.

20                   So that was an additional point in supporting,  
21 refusing to consider the Ramtek development.  
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2 If we look at the differences between the  
3 claimed invention and the prior art, some of the differences  
4 between the prior pinball machines which had been, you know,  
5 remained static for essentially 20 or 30 years, and the  
6 Nutting and Frederiksen invention, include the absence of  
7 electromechanical logic --

8 THE COURT: Let me ask you this: Do you think that  
9 the relevant prior art is the previous pinball, or do you  
10 think that the more relevant prior art is the microprocessor  
11 art?

12 MR. KATZ: I think it's a combination of arts.

13 THE COURT: Well, you don't have to convince me  
14 that the previous pinballs were very different from the  
15 electronic pinballs.

16 THE COURT: I think that it was a combination of  
17 people in the-- if you're going to look at a fictitious per-  
18 son, and make him into fictitious two people or one combined  
19 fictitious person, but I think that person would be, or those  
20 people would be a person from the pinball art and someone  
21 who was at least a digital, somebody from the digital elec-  
22 tronic or microprocessor art, who would be familiar with  
23 pinball machines. That type of person.

24 THE COURT: How about such a person working along  
25 with a separate person who was familiar with pinballs?  
Does it have to be one person?

1 MR. KATZ: I don't think so. In fact, our -- no,  
2 I would say not.

3 THE COURT: Your inventors were not.

4 MR. KATZ: Our inventors were -- our inventive  
5 entity was two people. Ramtek's inventive entity, or their  
6 attempt to invent, was three people. And the Atari people,  
7 Atari development, was done by multiple people also.

8 I would think that if you do an analysis of  
9 the patent and the prosecution history and you look at the  
10 claims, the claims are directed to pinball machines.

11 And I think that the relative art is a com-  
12 bination of the electromechanical pinball machine art and  
13 the microprocessor art..

14 And I think that the evidence shows that we're  
15 talking about the combined or hybrid art. A person skilled  
16 in the art, I guess in '73 - '74, I would say, would be a  
17 digital logic designer having some understanding of electro-  
18 mechanical pinball machines.

19 That's about as good as I can get.

20 THE COURT: I gather that plaintiffs and defendants  
21 pretty well agree on that proposition.

22 MR. KATZ: We do dispute the defendants' position  
23 that suggests that, in its brief that they recently filed,  
24 that the person skilled in the art was proficient in micro-  
25 processor applications.



1 We believe that that's improper to the extent  
2 that the definition of proficient means well advanced or  
3 expert in any science, art or subject, because the statute,  
4 Section 103, speaks specifically of a person of ordinary skill  
5 in the art.

6 I think that if we looked at the --

7 THE COURT: Of course, it's a little like talking  
8 about an astronaut of ordinary skill.

9 MR. KATZ: Right.

10 THE COURT: If you're a microprocessor designer,  
11 you're a pretty skillful person, if you're at the bottom of  
12 the heap.

13 MR. KATZ: I tried not to speak in those terms.  
14 when I talked about the Ramtek and Atari work for that reason,  
15 that it's difficult for me to perceive exactly what that is.

16 But I think that -- it seemed to me that the  
17 people who tried in this field with Atari and Ramtek were  
18 in fact people who were expert at what they were doing and  
19 that they failed to do it.

20 In my mind that shows that it was unobvious.

21 And I think that it's important to keep in  
22 mind that we're talking at the -- about the time that the in-  
23 vention was made, because that's the critical time period.

24 In a recent case, W. L. Gore versus Garlock  
25 of the Federal Circuit, the Court said, talking about the,

1 first talking about the consideration of the invention as a  
2 whole, the Court said:

3 "Each claimed invention must be considered as

4 a whole," citing Section 103.

5 In determining obviousness there is, quote,

6 "no legally recognizable or protected essential gist or heart  
7 of the invention," emphasizing the fact that the Courts must  
8 look at the invention as a whole.

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2 And with respect to the question of applying  
3 the standards as of the date of the invention here in 1974,  
4 "...to imbue one of ordinary skill in the art  
5 with knowledge of the invention in suit."

6 This is also a quote from that case:

7 "When no prior art reference or references of  
8 record convey or suggest that knowledge is to fall  
9 a victim to the insidious effect of a hindsight  
10 syndrome wherein that which only the inventor  
11 taught is used against its teacher."

12 The Court goes on to say:

13 "It is difficult but necessary that the de-  
14 cision-maker forget what he or she has been taught  
15 at trial about the claimed invention and cast the  
16 mind back to the time the invention was made, often  
17 as here many years, to occupy the mind of one  
18 skilled in the art who was presented only with the  
19 references and who is normally guided by the then  
20 accepted wisdom in the art. Had that been here  
21 done, the events set forth," -- and so on, "could  
22 only have been held non-obvious to those skilled  
23 in the art at the time that the invention was made."

24 Turning to some of the points raised by the  
25 defendants, and referring to their item about the claims being  
indefinite and, therefore, invalid under Section 112 of the

1 statute, for failing to particularly point out and distinctly  
2 claim what the invention is, I would say that these claims  
3 were not rejected by the patent examiner on Section 112, which  
4 he had the duty to do, although he did, during both the orig-  
5 inal application prosecution and during the re-issue applica-  
6 tion, he did reject some claims on the grounds that they  
7 weren't definite, and so he certainly knew that he, what he,  
8 you know, that he had to do that.

9 In the re-issue proceeding, at Bates 71 in  
10 Plaintiff's Exhibit 415, for example, the examiner entered a  
11 rejection. He said, "Claims 30 through 32 and 60 to 62 are  
12 rejected under U.S.C. 112 second paragraph for being vague.  
13 Claims 30 and 60 recite, 'lamp operated, optical coupling  
14 means', but lack any positive recitation to a lamp, such reci-  
15 tation is inferential and, therefore, indefinite," and so on  
16 and so on, and then we corrected it by amending the claims.  
17 And the original prosecution of Claim 45 comes from the orig-  
18 inal prosecution, he also at some point in the prosecution  
19 reviewed the claims for indefiniteness. And at, in Plaintiffs'  
20 Exhibit 2, Bates 99, he entered a rejection claim, these were  
21 claims that were later cancelled, "Claims 1 to 19 are rejected  
22 under 35 U.S.C. 112 second paragraph for being vague and indef-  
23 inite, the term 'set high frequency' appearing in Claim 1 and  
24 12 has no antecedent basis. Claims depend here on -- decided  
25 indefiniteness," so he was checking claims.

1 And just as patents are complicated documents,  
2 this particular patent seems to be one that is, you know, uses  
3 the statutory section 112 "means plus function" language.

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THE COURT: Let me ask you this, Mr. Katz: Did the examiner anywhere say that he was aware that the validity of the reissue patent depended upon noise immunity techniques that inhered in the computer program as distinguished from the hardware of the patented device?

MR. KATZ: He said in the prosecution, by means of his action, that the claim --

THE COURT: Excuse me, not by means of his action. That's almost getting into the "means plus function" type --

MR. KATZ: No, I mean --

THE COURT: -- analysis. What I want to know is, can I look into this reissue file and find anywhere to my satisfaction that the examiner knew the, essentially, the quo equal importance of the hardware and the software to this patent?

MR. KATZ: Only that he said that the program was essential to the invention. He said --

THE COURT: Where did he say even that?

MR. KATZ: In PX-2, page 101.

THE COURT: Maybe you can read it to me.

MR. KATZ: He says, this is where he thought that there wasn't a program listing and then it was pointed out it was there, he said:

"The disclosure is objected to under section 35 U.S.C. 112, first paragraph, for being insuffi-

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1           cient. The instant application has set forth a  
2           microprocessor-based multiplexed electronic game  
3           without showing how such a device is operated to  
4           maintain the necessary controls. For example,  
5           a detailed flow chart indicating the system operation  
6           and/or the software for programming said micro-  
7           processor has not been set forth. These showings  
8           are necessary to provide those attempting to make  
9           and use the instant invention the program sequen-  
10          cing and option controls for effecting a viable  
11          computer based game. Such a device would  
12          have to maintain scoring status, be capable of  
13          exercising player options, administer interrupts  
14          in a time effective manner and establish effective sub-  
15          routine addressing for sounds, awards scoring,  
16          malfunctions and other features. Without further  
17          elucidation the instant disclosure is not deemed  
18          to afford those ordinarily skilled in this art  
19          the requisite means to make and use the invention  
20          without undue burden and experimentation."

21               Then when it was pointed out that the program  
22          listing was part of the application, he withdrew that  
23          rejection.

24               THE COURT: Is that statement in your opinion  
25          evidence and awareness of the noise immunity techniques  
             allegedly inhering in this software?

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1 MR. KATZ: No, your Honor. The noise, although  
2 there are express references to noise in this specification,  
3 I haven't in detail, other than what Dr. Schoeffler testified  
4 about, I haven't reviewed those again to see, there are  
5 certain express references to noise and, but it is our  
6 position that the plaintiff, particularly in a breakthrough  
7 patent where you are at the early stages of a developing art,  
8 that you don't always, the inventor is not always aware of  
9 every effect or all of the advantages that flow from a  
10 particular, from his particular invention. And the law  
11 doesn't require that. So long as someone can make and use  
12 the invention from the disclosure of the patent.

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1 THE COURT: I am really speaking not so much at  
2 this point of what was in Mr. Frederiksen's mind at the time  
3 of the invention, but what was in the examiner's mind when  
4 he approved the reissue.

5 MR. KATZ: Offhand I don't have that.

6 Professor Kayton, the defendants noted that  
7 Professor Kayton said that one would have to review the file  
8 history in considering the infringement of the claims. And  
9 the plaintiff submits that Dr., well, Professor Kayton's  
10 testimony that Dr. Schoeffler's reading of the claims was  
11 consistent with the file history satisfied that requirement.

12 With respect to the chart that has all this  
13 infringement summary, and I know we don't have to get into  
14 the issue of infringement, but just with respect to points  
15 that, some points that the defendants tried to make; this  
16 combination of noise prevention and immunity techniques to  
17 allow operative matrix multiplexing that Dr. Schoeffler  
18 referred to is a broad concept. These individual elements  
19 were merely specific points, specific features that were  
20 common to the patent and to the defendants' devices that  
21 were listed. They were just exemplary and it wasn't the  
22 intention of, it is not the plaintiff's position that these  
23 specific things have to be in there.

24 THE COURT: As a matter of fact, Dr. Schoeffler's  
25 point was exactly the opposite. He said no matter what was

1 in there, it would work, it would infringe.

2 MR. KATZ: So long as it was --

3 THE COURT: Certain other elements were also  
4 present.

5 MR. KATZ: Right, and so long as you had the, this  
6 concept of noise prevention, hardware and the noise immunity.

7 And the other point that Mr. Schnayer points  
8 out is that there was this real time response that had to be  
9 accomplished in the pinball machines because you had the  
10 multiple things occurring. But those things --

11 THE COURT: Without that, you wouldn't have a  
12 pinball machine.

13 MR. KATZ: That's right. Those things go to the  
14 practical aspects of it; otherwise, people would just dis-  
15 card the machine, it wouldn't go anyplace.

16 Going to some other points that they raised,  
17 the defendants raised some questions about a claim 1 which  
18 we haven't put in suit. I guess I don't need it, I won't  
19 pull it out. But pointing out the differences in claim 1,  
20 in stating as a premise that claim 1 was not patentable in  
21 its original version, the original claim 1 was not patentable,  
22 but that's -- there is no basis for that assumption; even  
23 though it might have been rejected and the defendants amended  
24 it so as to restrict the scope of the invention to the pinball  
25 machine art, the examiner had indicated that that was what he

3  
1 thought was the intention anyway.

2 And the fact that the plaintiff or the  
3 applicants voluntarily restrict the scope of their claim to  
4 something to perhaps less than they could have otherwise  
5 fought for, what is not an admission, that that would be  
6 unpatentable. It is just that we didn't contest that par-  
7 ticular, those particular points.

8 THE COURT: Aren't the realities of the situation,  
9 though, that the patentee is always trying to get as much  
10 as he can and that the examiner knows that?

11 MR. KATZ: Usually.

12 THE COURT: Doesn't the examiner know that in  
13 suggesting a shrinking of the claims, he is striking a terrible  
14 blow?

15 MR. KATZ: Speaking as a former examiner, your  
16 Honor, I would say that the examiner sees his function as  
17 restricting scope and the applicant's function as expanding  
18 scope. And he tends to --

19 THE COURT: But he knows that he is not dealing  
20 with a matter of indifference.

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2 MR. KATZ: That's right. But in this case, the  
3 applicants have, have attempted to compromise just for the  
4 basis of expediency, because of some of the times that have  
5 gone through.

6 In any event, I just wanted to point out that  
7 there wasn't any admission there, and there wasn't any basis  
8 for assuming that we conceded, you know, that there was any--  
9 there shouldn't be any detrimental effect.

10 And the Claim 1, before it was amended,  
11 doesn't become prior art all of a sudden against other claims.  
12 I mean the prior art is what the prior art is. And we don't,  
13 we wouldn't be manufacturing prior art by amending the  
14 claims.

15 THE COURT: Well, I gather that the reference to  
16 Claim 1 is made as much to reflect upon the thought processes  
17 of the examiner as it is to indicate an admission by plain-  
18 tiff.

19 MR. KATZ: But it was clear that the examiner --

20 THE COURT: Why did the examiner allow the claim  
21 for pinball but deny it for a mass?

22 MR. KATZ: You mean for a game apparatus generally.  
23 He felt that--

24 THE COURT: Except that there is this additional  
25 thing about the distinction between the mass and a pinball.

MR. KATZ: And also, with a pinball game I think  
he knew, we had a surface projectile game, he knew the

1 problems that were encountered; he was familiar with the art.  
2 I think when you say "game apparatus," then  
3 it is questionable what art you are talking about, and gener-  
4 ally the problems which you are encountering and so on in  
5 determining the question of obviousness that might have come  
6 into play. But he did combine, I believe, in one rejection  
7 three different slot machine references in order to try to  
8 show that he would reject the broader game apparatus type  
9 claims that weren't limited to the pinball machine.

10 THE COURT: Was --

11 MR. KATZ: We didn't really contest that. We  
12 amended it.

13 THE COURT: Was Claim 1, though, essentially  
14 similar to Claim 45?

15 MR. KATZ: It didn't have a pinball, it wasn't  
16 limited to a surface projectile; it just said, "game appar-  
17 atus."

1 THE COURT: With that exception are they sub-  
2 stantially the same?

3 MR. KATZ: I believe so, your Honor. Except, now,  
4 the new claim for one also says that everything is contained  
5 in a unitary structure, so it's more limited, more restric-  
6 ted.

7 THE COURT: I take it that the question that's  
8 being raised by the defendants is: What can we conclude  
9 about what was going on in the examiner's mind from the fact  
10 that he hinged your success upon your changing the claim to  
11 a surface projectile.

12 MR. KATZ: But that's not a correct assessment,  
13 Your Honor, because that was only one of many rejections.

14 So having overcome that, we would have had  
15 to overcome all of his other things, too.

16 I mean, he had allowed the pinball games at  
17 one point in the prosecution where we restricted, at his  
18 suggestion, to have a unitary device. And then he reopened,  
19 he changed his mind and he reopened that after the petition,  
20 and there was additional prior art submitted -- Or, additional  
21 paper was submitted, and he reconsidered that.

22 And then he asked -- that's -- and we, the  
23 plaintiff, then said: "Well, we don't want this restricted  
24 claim." We only put the restricted claim in for the sake  
25 of expediency.

2  
1 And the examiner said, well, it was important  
2 to him, and if we wanted to make an issue of it, then we  
3 would -- we could put the broader claims back in and fight  
4 the battle.

5 Well, we did, because he had sort of -- he had  
6 gone back on his agreement on the allowance.

7 So there was a question here, the prosecu-  
8 tion was so lengthy that there was a matter of concession  
9 just for the sake of reaching an expedient termination of the  
10 proceeding.

11 As your Honor was aware, there was tremendous  
12 difficulties in bringing this proceeding to a conclusion. So  
13 there was a tendency to keep asking for more and more informa-  
14 tion about it.

15 I don't know if that clarifies the point,  
16 but --

17 THE COURT: Thank you.

18 MR. KATZ: With respect to the New York Racing  
19 Association case the defendants mentioned, where the Court had  
20 held that the computerization of that totalizer for racetracks  
21 was obvious, there they held that there weren't any problems  
22 in doing it. I mean, specifically the opposite of the case  
23 here.

24 Here every indication is that there were  
25 problems. The noise problems were in fact running throughout



1 the entire reissue proceeding.. And the examiner considered  
2 them very important, and particularly in determining there  
3 was no reduction to practice of the Atari and Ramtek  
4 developments.

5 In this case there wasn't any -- in this  
6 Racing Association case, the facts were different. There  
7 there wasn't any problem in putting a computer in the score-  
8 board, for whatever reason. Here even the experts, I say,  
9 couldn't do it.

10 In connection with a case that the defendants  
11 cited in their brief, I think it was In Re Thesis, where the  
12 Court had found that noise problems in that particular case  
13 were easy to solve, but that was a different -- the facts  
14 were completely different. That's what they found in that  
15 case.

16 It was discussed in the patent -- that par-  
17 ticular case was brought to the attention of the Patent Office  
18 in the Plaintiff's Exhibit 1, Bates 1565 through 1567, where  
19 that case was discussed. And the defendants brought that  
20 particular case to the attention of the examiner, and it was  
21 fully explored, and it was not considered controlling by the  
22 examiner.

23 With respect to the defendants' reference to  
24 the Intel MCS 4 manual, while it discusses solenoids and  
25 displays and other things, the interesting point to note is,



4  
1 as pointed out by Dr. Schoeffler, that the book doesn't con-  
2 cern itself with noise problems, it doesn't mention noise  
3 problems at all in the book, and doesn't even recognize it.  
4  
5 So from that standpoint it is deficient as  
6 a reference.

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2 When we discuss the prior art here and we talk  
3 about patentability and obviousness, it's important to talk  
4 about what the prior art is.

5 I think that if you just look at the invention  
6 itself, you can't make a proper assessment without looking at  
7 the time the invention was made. You have to look at the  
8 invention as a whole and look at it against the backdrop of  
9 workers in the art and the prior art that was cited against  
10 it.

11 On the commercial success point, in attribu-  
12 ting the Bracha and Englehardt or the commercial Bally coin-  
13 operated system to the Frederiksen and Nutting patent in suit,  
14 they claimed that there wasn't a nexus.

15 But our position is, we believe that the  
16 record will show and shows that the nexus between the two was  
17 made by the examiner, who was privy to all of the information  
18 in the Patent Office.

19 With respect to the infringement as to whether  
20 you had one matrix or two matrices or three matrices, and you  
21 put the switches in one and the lights in another and the  
22 digital displays in the third, we believe that that was shown  
23 by Dr. Schoeffler to be covered by Claim 45 which wasn't  
24 limited.

25 The fact that new microprocessor systems, as  
John Lynch mentioned, were much faster, and instead of scan-

ning at 60 times a second, you scan at 500 times a second, meant that you could do a lot more things than what Frederiksen could do when he had a relatively slow system.

THE COURT: I indicated that you don't have to argue infringement, because I agree with you that at this stage of the proceeding a sufficient case has been made to require the defendant to go forward.

MR. KATZ: A couple of last points is that Mr. Goldenberg said that the state of the prior art was not before the examiner.

And plaintiff disputes that contention. We believe that the full state of the prior art in tremendous volume, in tremendous detail, was put before the examiner.

The point is that once the examiner found that the claims were patentable, he was -- he could allow the claims.

There wasn't a need to discuss a lot of these elements that we're discussing here, because the question of infringement was never involved in the Patent Office.

We have a question of infringement here, and that has raised those issues.

Some of the argument that the defendants have made I think confuses the infringement and validity matter.

The block diagram that Mr. Goldenberg showed was, I believe, and as Dr. Schoeffler testified, was essen-

1 tially an oversimplified version of the Motorola microproces-  
2 sor system, and so everything would look the same if we just  
3 looked at that block diagram.

4 Mr. Goldenberg admitted that he doesn't argue  
5 that it's an anticipation. But when you deviate, if you say  
6 then it isn't what it is, and you start to make it into some-  
7 thing else, whatever it becomes depends on what your assump-  
8 tions are.

9 And so I submit that any -- the similarity of  
10 anything to the block diagram of the Motorola computer chip  
11 system, that is, Williams' pinball machine, any similarity  
12 to the block diagram of the basic Motorola 6800 microprocessor  
13 system is due to the fact that Williams uses a Motorola 6800  
14 system. And Dr. Schoeffler went through that subject in some  
15 detail.

16 The last point was that in the document that  
17 Mr. Lynch brought -- in a paper that Mr. Lynch brought up,  
18 which was a paper that the plaintiffs filed actually relatively  
19 early in the prosecution of the Rule 3 issue, that said:

20 "Although protesters assert that the software  
21 can be of no help in construing the claim language  
22 because the program listing was not part of the  
23 specification, this is erroneous because it is  
24 available and was filed as part of the original  
25 application," it goes on and so on.

1 And then there was this one statement that he  
2 pointed out. It says:

3 "Further, even though the program listing is  
4 a part of the original application, the specifica-  
5 tion by itself sufficiently defines the operation  
6 of the claimed invention. Therefore it is irrele-  
7 vant if the program listing is or is not part of  
8 the specification."

9 And I wanted to make it clear that that was  
10 in a paper relatively early, and in a paper that was being  
11 filed.

12 The title of that paper was, "Response to  
13 Protesters Gottlieb and Rockwell's reply to communication  
14 dated May 17, 1982."

15 Initially the -- on May 17, 1982, the Examiner  
16 had issued a statement requesting information and asking for  
17 responses.

18 And the protesters filed a response which they  
19 entitled -- this was in June of '82, they filed a response  
20 that said, "Protesters Gottlieb and Rockwell's reply to  
21 communication dated May 17, 1982," and in that particular  
22 paper, which was just ahead of this paper and to which I was  
23 replying:

24 "The protesters question what cyclical and  
25 sequential multiplexing means in light of the

1 specification. The term does not appear in the  
2 specification. And since the software is not a  
3 part of the specification, the software can be of  
4 no means in determining what cyclic and sequential  
5 means. Clearly such language should be given its  
6 broadest reasonable interpretation during these  
7 prosecution proceedings."

8 And then I replied with this response, saying  
9 it didn't really matter, because cyclic and sequential is  
10 in the specification. It actually is in the specification.

11 And we pointed that out. Professor Kayton  
12 pointed out several places where it's there.

LP 1 There was never any statement that the speci-  
2 fication -- that the program listing was not a part of the  
3 application.

4 That concludes my argument.

5 THE COURT: Thank you, Mr. Katz.

6 Mr. Schnayer.

7 MR. SCHNAYER: Thank you.

8 I'd like to just clarify one thing that Mr.  
9 Katz said. I'm not sure if his answer was accurate or not.

10 This is the question of an improvement patent:  
11 the Bracha patent is an improvement patent over the Nutting  
12 patent. And if a person wanted to practice the Bracha patent,  
13 a person who held title to the Nutting patent could prevent  
14 him from practicing that.

15 But that's an academic question, since Bally  
16 owns title to both of the patents.

17 THE COURT: Oh. I don't think Mr. Katz misled me,  
18 but I was under an erroneous impression.

19 So actually, unless the same person owns both,  
20 or at least unless they're both owned by people who can get  
21 together, --

22 MR. SCHNAYER: Right.

23 THE COURT: -- then the improvement patent is  
24 worthless.

25 MR. SCHNAYER: Right, because the person who in-

1 vents the basic technology is the one who allowed that to  
2 happen in the first place, so that's very significant.

3 THE COURT: And Bracha is specifically denominated  
4 an improvement patent?

5 MR. SCHNAYER: Well, let me say this: The Nutting  
6 claims read on Bracha. Bracha--

7 THE COURT: But does it say anywhere in the Bracha  
8 patent --

9 MR. KATZ: It only has reference to the Nutting  
10 and Frederiksen invention in the prosecution history of it.

11 MR. SCHNAYER: There is nothing in the Bracha  
12 patent itself that talks about it at all.

13 THE COURT: So if somebody else owned the Freder-  
14 iksen patent, they'd have to file a lawsuit to get any relief.  
15 Right?

16 MR. SCHNAYER: Somebody who owns the Nutting and  
17 Frederiksen patent could stop other people from practicing  
18 that invention. And if that invention happened to also in-  
19 clude those extra features of Bracha, then they could stop  
20 them from practicing the Bracha patent completely.

21 THE COURT: I understand that.

22 MR. SCHNAYER: But it's possible to have some-  
23 body who is --

24 THE COURT: But there's nothing self-executing  
25 about that.



1 MR. SCHNAYER: No.

2 THE COURT: In other words, you'd have to start all  
3 over again and show that the practice of the Nutting patent  
4 violates the Frederiksen patent.

5 MR. SCHNAYER: That's right.

6 THE COURT: Yes.

7 MR. SCHNAYER: That's right. Somebody, in other  
8 words, they're independent, actually, in that regard.

9 THE COURT: All right.

10 MR. SCHNAYER: I'm going to address the question  
11 of contributory infringement and inducement under Section  
12 271B and C very shortly.

13 There was a statement by Mr. Lynch that there  
14 was no evidence submitted at all, adduced at all at this  
15 trial concerning those issues, and that's not true.

16 There was testimony that was submitted in  
17 the form of deposition transcript of Mr. Allen Edwall and also  
18 of Mr. John Footh, and both of those people testified about  
19 the fact that the electronics of the Gottlieb machines are  
20 manufactured by Rockwell.

21 They're manufactured specifically for use in  
22 those machines. And there's been concerted activity over the  
23 years to sell and provide those boards and make improvements  
24 on those boards for Gottlieb. And that's inducement and  
25 contributory infringement.

1                    Apparently Mr. Lynch might not have looked  
2 over our designations to recognize that.

3                    Your Honor might recall that there was a  
4 motion for summary judgment on this very matter when Rockwell  
5 was first joined as a party, and at that time the Court  
6 denied the motion for summary judgment.

7                    So I would say that there is no evidence to  
8 show the contrary, and there is evidence to show that there  
9 is contributory infringement inducement, and therefore the  
10 motion should be denied.

11                   There's most certainly an issue of material  
12 fact.

13                   THE COURT: All right. Thank you, Mr. Schnayer.

14                   Do the defendants wish to reply briefly?

15                   MR. LYNCH: Briefly, your Honor, may it please the  
16 Court.

17                   With respect to the matter just addressed, my  
18 point was, there is no evidence that attempts to construct  
19 how these two parties work together in this complicated noise  
20 suppression immunity real time fashion.

21                   There is what happened.

22                   I believe the evidence will also show that  
23 with respect to the later games, that is, Cleo is the first  
24 set of games, with respect to the later games of Gottlieb,  
25 I believe Gottlieb wrote the software.

-3-5 1 Where that brings us out on that matter, your  
2 Honor, I don't know.

3 But let me address one thing, first of all.

4 Mr. Katz said that this statement about the  
5 program listing, where he says it's irrelevant if the program  
6 listing is or is not part of the specification was early:  
7 it wasn't.

8 It was in November of 1982.

9 The only things that occurred after that were  
10 the allowance of the case; then there was the ninth office  
11 action in which there was the requirement, where he said,  
12 "Okay, submit the program listing;" and then there was the  
13 tenth office action where he said -- where, after objection,  
14 he said, "Don't submit the listing."

15 So that's what happened right at that point  
16 in time.

17 MR. KATZ: July of '82.

18 MR. LYNCH: July, '82. I'm sorry.

19 But it's right before allowance November is  
20 the next action, November of '82 is the next action. It was  
21 a request for information on May 12, '82. So it was relative-  
22 ly near the end of the prosecution, your Honor.

23 With respect to the other matter, your Honor,  
24 that I raised, I would just like to point out to the Court:  
25 the conception alleged to have existed, that conception was

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1 filed, this document with the Appendix B, with the record  
 2 citations to support all the claimed elements of the concep-  
 3 tion, was filed on November 23, 1981.

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2 Considering that this began in October or  
3 thereabouts of '78, that was three years into it. All of  
4 the, most of the Atari stuff at any rate, had already been  
5 taken.

6 In the next office action, your Honor, and your  
7 Honor asked a question about whether the examiner said any-  
8 thing about noise; here in the next office action, after this  
9 was filed, after a complete record of the conception is  
10 alleged to exist with these documents, no references to  
11 noise, no references to software, the examiner says:

12 "From the evidence of record it would have  
13 appeared that only ordinary constructive skill would  
14 have been required to implement the matrix multiplex  
15 hardware design from the schematics developed by  
16 Frederiksen and interface the same to computer and  
17 pinball features. Furthermore, the software gener-  
18 ation for game implementation would have only de-  
19 manded routine skills as evidenced by Cox' work on  
20 El Toro. Even, and even if some routine experimen-  
21 tation is necessary to reduce the invention to  
22 practice, such is permitted so long as the dis-  
23 closure of the conception is of such sufficiency  
24 to teach the practitioner which experiment to per-  
25 form in order to realize the device without use of  
inventive faculties. Thus, from the evidence of

-2 1 record it would appear that the disclosed subject  
2 matter surrounding conception of a multiplexed  
3 microprocessor controlled pinball machine cover-  
4 ing the features of the most broadly defined claimed  
5 --" it says "claimed," I think it means "claims,"  
6 it says e.g. claims, et cetera, et cetera, "is  
7 sufficient absent concrete evidence to the con-  
8 trary."

9 The examiner accepted the proposition of that  
10 conception.

11 He went on at March 15, '82 to say:

12 "The Winter deposition was considered to  
13 further corroborate the evidence leading to con-  
14 ception."

15 There was nothing about software in Mr.  
16 Winter's deposition.

17 And in the very last office action, the exam-  
18 iner said:

19 "Up to the moment of re-issue applicant's  
20 conception, there did not exist any computer-based  
21 pinball device."

22 We agree. As of December, 1973, there did  
23 not exist a pinball device, computer pinball device.

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2 Your Honor, it was suggested that somehow,  
3 the burden devolves on defendants to rebut in one fashion or  
4 another the reduction to practice, that some type of presump-  
5 tion attaches to the reduction to practice date.

6 Just to provide the Court with the authority  
7 on the topic, your Honor, "The burden upon one who seeks to  
8 establish a date for his invention prior to that of his  
9 application has always been deemed a heavy one. Courts re-  
10 gard the effort with great jealousy and must be persuaded with  
11 a certainty which is seldom demanded elsewhere, quite as  
12 absolute as a criminal case in practice, perhaps even moreso."

13 That was United Shoe Machinery v. Brooklyn  
14 Wood Heel Corporation, Second Circuit 1935, and Judge Learned  
15 Hand.

16 Citing that case, Grefco v. Kewanee Industries,  
17 a District Court case, District of Delaware, cited at 208 U.S.  
18 P.Q., 1980, "The burden rests with the inventor to demonstrate  
19 an invention or reduction to practice prior to the time of  
20 filing."

21 Another case, Rooted Hair, Inc. v. Ideal Toy  
22 Company, Court of Appeals for the Second Circuit, your Honor,  
23 the Court found that, "Sotzky failed to establish a date of  
24 invention earlier than the date of his application. We note  
25 first that the patentee's burden of proof regarding a pre-  
filing date of invention is as heavy as that assumed by one

2  
1 who seeks so that the patent invention was anticipated by  
2 an earlier device."

3 So whenever one moves off that official date  
4 of filing, it is fair, everyone has the same burden. And  
5 that burden devolves upon the patentee as well.

6 There are numerous other authorities with  
7 which we can provide the Court, but the United Shoe Machinery  
8 case, your Honor, I think adequately provides the basis of  
9 the authority.

10 I would like to point out to the Court one  
11 item. Mr. Tone suggested that clearly something occurred on  
12 September 26, 1974; these four people witnessed it. Indeed,  
13 they did witness it. There is no testimony, and Mr. Conroy  
14 on examination couldn't testify about any of the software or  
15 hardware, said he wasn't technical. Mr. Bracha was the person  
16 who was technical, and Mr. Bracha didn't come in.

17 But, the point is, is there's two documents  
18 on this at Bally and they do say one thing that is rather  
19 interesting.



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2 The Bracha report, which is Plaintiff's  
3 Exhibit 87, says on the final page -- I'm sorry -- the Bracha  
4 report says on the final page -- let me take the second one,  
5 Exhibit 87 is the Telnaes report. It indicates the following:

6 "Presently MCI intends to test the prototype."  
7  
8 Intends to test.

9 The Bracha report, the Bracha report, which  
10 is a document which I have here somewhere, likewise similarly  
11 indicates -- here it is, "Equipment has not been subjected  
12 to any test program."

13 Those are the two reports of Bally that came  
14 after that September 26, 1974, and those are the most con-  
15 temporaneous documents we have about that. There is no  
16 contemporaneous documents originating from Frederiksen about  
17 that occasion.

18 There was, your Honor, also a mention of the  
19 Ramtek effort. And the Ramtek effort was demeaned or at  
20 least minimized.

21 Around this same time, a Bally individual,  
22 Mr. Telnaes, who, your Honor, one of the last memos I men-  
23 tioned was authored by, wrote another memorandum around the  
24 same time; in December of 1974, he went to see Ramtek and he  
25 went to see their machine. They had a microprocessor-  
controlled flipper machine.

Mr. Telnaes' reaction to the Ramtek design

1 is in the document that has been marked as Defendants'  
2 Exhibit 4-CC. "The flipper game," design of Ramtek, he is  
3 talking about, "has 'proven' that the ultimate implementation  
4 is fully feasible economically and certainly technically."

5 Indeed, Bally didn't buy the Ramtek design,  
6 but Bally didn't buy the Frederiksen design either.

7 As a final matter, your Honor, I would like  
8 to call the Court's attention to a recent case of the Court  
9 of Appeals for the Federal Circuit. It is the case of  
10 Meditronic, Inc. v. Cardiac Pacemakers, Inc. The case  
11 involved cardiac pacemakers and it involved several patents,  
12 in which cardiac pacemaker inventions were evaluated. The  
13 first of them involved a cardiac pacemaker which had an  
14 invention in it which would prevent the pacemaker from going  
15 above a certain rate. If there is a malfunction in the  
16 pacemaker, the one thing you do not want to happen is some-  
17 one's heart to beat too fast; it can cause a fibrillation and  
18 kill him.

19 So the one thing you do not want to have is  
20 the pacemaker beat too fast. So the invention purportedly  
21 was a circuit within this digital logic array in the pace-  
22 maker that would under all circumstances not let the pace-  
23 maker go faster than a certain rate.

The Court evaluated that and said the following: "The scope of the prior art includes pulse-controlling circuitry within and without the cardiac pacemaker field."

And expanded on that further down, but let me go through it in sequence. There was also some part there that was nothing more than an ad, analogous, I submit, to the Intel ad. The ads which suggest that rate limit of circuitry would be a good idea in a pacemaker; the Court said: "The ads, though they contain no technical details, indicate in their relevant portions the advisability of employing circuitry to protect against pacemaker runaway caused by battery failure." Runaway is going too fast.

The Court continues: "The plaintiff's, Meditronic's contention that a pacemaker designer in 1964 would not have looked to Case or Goda" prior art patents, "solely because those patents disclosed circuits used in high power, high frequency devices is not persuasive. Faced with a rate-limiting problem, one of ordinary skill in the art would look to the solution of others faced with rate-limiting problems."

The Court went on: "The ads clearly disclose the advisability of runaway inhibitor circuitry to protect against pacemaker runaway. One skilled in the art faced with the problem of preventing a runaway with that

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1 suggestion to use circuitry would look for a solution among  
2 the circuits employed by others faced with the same problem."

3 The case, your Honor, appears at 721 F. 2d  
4 1563, and is a 1983 case.

5 And I submit, your Honor, that in this case,  
6 one faced with the purported problems, even the purported  
7 problems of noise that do not appear in the claims, would have  
8 gone into the area and the technology involved with solving  
9 that problem. And as your Honor has heard repeatedly, every  
10 one of the solutions was a quite standard solution that an  
11 electrical engineer of the skill that we are talking about  
12 here carries around with him. That's in his bag of tricks.

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1LP 1 THE COURT: What was the device that was involved  
s. 2 in that case again?

3 MR. LYNCH: It was a cardiac pacemaker, something  
4 that they plant to beat the heart.

5 THE COURT: And the name of the case?

6 MR. LYNCH: Meditronic, Incorporated versus Cardiac  
7 Pacemakers, Inc.

8 THE COURT: Thank you.

9 MR. LYNCH: Thank you, your Honor.

10 THE COURT: Mr. Katz.

11 MR. KATZ: Your Honor, just one point, two points.

12 The first is that the memo referred to by Mr.  
13 Lynch as Defendant's Trial Exhibit 4CC, in the sentence that  
14 he read to the Court, tells him about, "The flipper game  
15 design has proven that the ultimate implementation," and so  
16 on, the word "proven" is in quotes.

17 And on the next page, in the next to the last  
18 paragraph, the memo says, "Ramtek has designed a 'standard'  
19 pinball machine which utilizes Intel's 4004 microprocessor  
20 chip in about 60 to 70 standard TTL chips. The design is  
21 complete on paper, second level, and the microprogram is  
22 complete."

23 So he had put things in quotes. And it was  
24 actually not a complete -- there was no game built. It was  
25 just a paper. It was on paper at this time.

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2 The other point is that even the -- the other  
3 thing is that in this document, the reference to testing, it  
4 doesn't say anything about noise testing. It could be field  
5 testing and so on. And it is indefinite. In our case --

6 The Bracha and Telnaes memos both refer to  
7 merely testing and they don't say specifically noise testing.

8 In connection with the Meditronic case, in  
9 our case it is quite different. Here it seemed that at the  
10 time that, about the time the invention was made, even the  
11 experts who were working on this project failed to do this; in  
12 fact, rejected ultimately the invention of the patent.

13 THE COURT: All right, thank you.

14 Mr. Goldenberg?

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MR. GOLDENBERG: Very quickly, I hope, your Honor.

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Plaintiff's history charts, if I may call them that, act as though time began in 1974. It really didn't. The microprocessor was introduced to the industry in 1971. It was introduced in small quantities at high prices. And what one saw, as one has seen over the history of electronics, improvements were made, prices were reduced, it became available and useful for engineers to put in their devices. That chart ignores that history.

The other bit of history that chart ignores, specifically with respect to Nutting and Frederiksen, is the Mirco history, the effort on the part of Nutting and Frederiksen to supply games to this Phoenix company.

And the response was, after an effort to deliver equipment, was that the software doesn't work, the hardware doesn't work, and nothing came of it. It was a dud in the market. And that was the result of the Flicker effort.

THE COURT: When was that famous letter? Was that before or after September 26?

MR. GOLDENBERG: It was after September 26. The Mirco letter?

THE COURT: Yes.

MR. GOLDENBERG: Yes, sir. That was after September 26. They changed computers, but it still didn't work. And as Mr. Lynch pointed out, and I really

1 think it is worth noting that the Flicker game for all of its  
2 testing and so forth that we have heard about never left the  
3 laboratory. It never went out onto the street. It never  
4 went to any institution resembling Frank's Pizza Parlor. We  
5 don't know what would have happened to that game on location.

6 Finally, I just wish to have reference to the  
7 case cited by plaintiff, American Hoist and Derrick v. Sola,  
8 and at 725 F. 2d 1350, I think it very important to note that  
9 at page 1359 of that decision, the Court said that: "When  
10 an attacker in sustaining the burden imposed by Section 282  
11 introduces prior art or other evidence not considered by the  
12 PTO, there is, however, no reason to defer to the PTO so far  
13 as its effect on validity is concerned."

14 As we said earlier today, we believe this  
15 record has a great deal of evidence that was not available  
16 or considered by the PTO, even other than prior art; the  
17 testimony of a great number of witnesses and just very visible  
18 evidence indeed on some occasions about defects in the  
19 Flicker game, even before it was totally disabled.

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2 I would continue, however. The Court went on  
3 to say, and this is at page 1360:

4 "What the production of new prior art or  
5 other invalidating evidence, not before the PTO  
6 does, to eliminate or at least reduce the element  
7 of deference due to the PTO, thereby partially if  
8 not wholly discharging the attackers' burden, but  
9 neither shifting nor lightening it or changing  
10 the standard of proof."

11 And so I submit that the presumption of  
12 validity, that the burden is an evidentiary saying and we  
13 have more than discharged our evidentiary obligation in that  
14 respect.

15 THE COURT: All right. Thank you, Mr. Goldenberg.

16 Do plaintiffs wish to add anything?

17 MR. KATZ: Just a couple of notes. One is that in  
18 Nutting's testimony, I believe he said that the game sent to  
19 Mirco was not a completed game. There was some business dis-  
20 pute between them, Mirco.

21 Also, with respect to the microprocessor art,  
22 there was this game Bally Alley that had been produced by  
23 Bally back in 1973, and that used a microprocessor, and that  
24 was disclosed in the original patent and in the re-issue.  
25 It was not a -- it was a simulated game, bowling game. But,  
that, the experience that Bally had with that game was cer-

-2 1 tainly not one that had inspired or motivated it to go and  
2 use that in pinball. It wasn't until the Flicker demonstra-  
3 tion that they started immediately with their pinball project,  
4 with the microprocessor.

5 THE COURT: Thank you, Mr. Katz.

6 We will recess now until 5:30. I will give  
7 you a decision at that time.

8 (Brief recess taken.)

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1 (Brief recess.)

2 THE COURT: I will first discuss the question of  
3 obviousness. The question is whether the invention as a  
4 whole would have been obvious to one of ordinary skill in the  
5 relevant art.

6 This is a combination patent, and I think  
7 Mr. Tone's formulation of the appropriate test in such a  
8 situation is helpful.

9 To paraphrase what he said, the question is  
10 whether the combining of the elements and the probable effect  
11 of the combination would have been obvious to a person of  
12 ordinary skill in the art.

13 The question is not whether the effect of  
14 each of the elements standing alone would have been obvious.  
15 The question is whether it would have been obvious to make the  
16 combination and whether the effect or result of the combina-  
17 tion would have been obvious to a person of ordinary skill.

18 I would like to discuss each of the three  
19 elements which require discussion under *Graham v. Deere*, and  
20 I would like to start with the third element, namely, the  
21 level of skill in the art.

22 The parties are in agreement that the person  
23 of ordinary skill would be a person ordinarily skilled in the  
24 microcomputer designing art who had knowledge of pinballs, or  
25 such a person with the necessary skill in the microprocessor

art along with one or more individuals who had the necessary knowledge about pinballs.

The cases have made it clear that the relevant art is determined by the nature of the problem whose solution is sought.

I think that it is somewhat superficial in this case to regard the problem as simply that of constructing a microprocessor pinball machine. That indeed is the objective, but it isn't the problem.

The problem, as is shown by the evidence of the plaintiff, is the problem of noise. And therefore it seems to me that the person of ordinary skill whom we will select on the basis of his acquaintanceship with the problem at hand, is necessarily a person who is skilled in dealing with noise in a microprocessor environment.

We aren't simply selecting an engineer who knows something about microprocessors or a person who knows about pinball machines and has some knowledge of microprocessors.

Rather, it seems to me that we are looking for a person such as Mr. Englehardt and such as Mr. Frederiksen, both of whom had had experience specifically related to noise in a computer environment; Mr. Frederiksen while in the military service and Mr. Englehardt while employed in various occupations prior to the time he went with Bally.

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1 By analogy, if we were going to select a  
2 lawyer of ordinary skill in the field of drafting patent  
3 claims, we obviously would not select a probate lawyer, even  
4 though he would have had considerable experience in drafting.  
5 We would not select a patent trial lawyer who did not draft  
6 claims, because although such a lawyer would undoubtedly have  
7 a considerable knowledge of patents, he may not have much  
8 experience in the actual drafting of claims.

9 By the same token, it seems to me that when  
10 noise is the problem, we do not select as a person of ordinary  
11 skill in the art of solving that specific problem a person  
12 who lacks sophistication in the field of electronic noise,  
13 and necessarily sophistication in the solution of that problem.

14 Now, perhaps what I have said thus far is  
15 itself obvious. But I want to make clear just who I think  
16 would be the hypothetical person or persons we are going to  
17 present this problem to.

18 To sum up, the person of ordinary skill in  
19 the art would be a microprocessor designer who had had con-  
20 siderable experience in dealing with noise in a microprocessor  
21 environment, and experience in dealing with solutions to that  
22 kind of problem and that specific problem.

23 Our hypothetical person would also have the  
24 necessary knowledge to wed a pinball machine to a micro-  
25 processor, or at least he would have sufficient knowledge of

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1 a pinball machine so as to handle those aspects of the  
2 problem which pertain peculiarly to the challenge of making  
3 a workable game.

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1 Now, this doesn't mean of course that he would  
2 be the preeminent person in the country in those particular  
3 skills. I'm still dealing with a person of ordinary skill in  
4 the relevant art.

5 But, just as I mentioned earlier this after-  
6 noon, when we talk about an astronaut of ordinary skills, we're  
7 probably talking about one of a very few persons. And I sus-  
8 pect that when we select our person of ordinary skill in the  
9 art involved in this case, we're talking about one of a very  
10 few persons in this country.

11 There are probably fewer of them than there  
12 are people who draft patent claims.

13 Now, the next inquiry under Graham against  
14 Deere is the scope of the prior art. And in determining what  
15 we mean by prior, we have to take a starting point.

16 For purposes of this discussion I am taking  
17 as the starting point September 26, 1974, on the assumption  
18 that that is the date the invention in suit was reduced to  
19 practice.

20 That is not a difficult assumption for me to  
21 make at this point, because there is considerable evidence  
22 in the record that that was indeed the date of reduction to  
23 practice.

24 Whether I would ultimately find that to be  
25 the date of reduction to practice, after I hear the evidence

3-2-2 1 of the defendant, is of course another matter. But for pur-  
2 poses of the 41(b) motion, I make the assumption that September  
3 26, 1974 is the date of reduction to practice.

4 What art is it whose scope we are determining?

5 Again, it would be a mistake, it seems to me,  
6 to say that the art involved is the pinball art.

7 There were no electromechanical pinball  
8 machines in commercial operation, at least on September 26,  
9 1974. And obviously the Frederiksen invention is very dif-  
10 ferent from any previous pinball machine that had been played  
11 in an arcade.

12 The relevant art for our purposes is the  
13 microprocessor art, because that of course is the art which  
14 involves the problem we have identified: the noise problem.

15 Now, the noise problem is perhaps exacerbated  
16 by the fact that we are going to introduce the microprocessor  
17 into a pinball machine. But I regard the primary focus of  
18 the prior art inquiry as being that addressed to the state of  
19 the microprocessor and computer and computer programming art.

20 To start looking around in the pinball art  
21 prior to 1974 for relevant prior art would simply be knocking  
22 down straw men. We don't want to waste time and dissipate  
23 our energies, so to avoid that, I think we should concen-  
24 trate on what was going on in the microprocessor art.

25 What was the scope of that art as it pertains



-2-3 1 to the obviousness question.

2 Well, the scope of that art included every  
3 single thing that comprises the claimed invention in this  
4 case.

5 What the scope of the art did not include was  
6 the precise combination of those elements. And therefore,  
7 our inquiry into the scope of the prior art leaves us with  
8 our basic question, namely, was the combination involved in  
9 Frederiksen's patent an obvious one.

10 Now, the third inquiry under Graham against  
11 Deere is this: what differences were there between the prior  
12 art and the Frederiksen invention.

13 The answer is essentially the same as the  
14 answer to the last question: the difference is the combin-  
15 ation.

16 All of the individual elements were old. What  
17 the present state of the record would establish is that the  
18 exact combination involved in Frederiksen was not antici-  
19 pated by any prior art.

20 Again we are left with the obviousness ques-  
21 tion concerning the combination.

22 Turning now from the questions required by  
23 Graham against Deere, the next inquiry is: What is claimed  
24 in the present invention.

25 In order to know whether the claimed combina-

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1 tion is obvious, we have to know what it is that was claimed.

2 For purposes of this initial inquiry, I am  
3 going to assume that all of the noise prevention and noise  
4 immunity characteristics and techniques of the hardware/  
5 software combination are included in the claims, either ex-  
6 pressly or by virtue of the means plus function language.

7 The question then is this: on that assumption  
8 was the combination of this hardware and software obvious on  
9 September 26, 1974, to a person of ordinary skill in the  
10 relevant arts, as we have defined that person and those arts.

11 Let's look again at the problem whose solution  
12 was being attempted: the problem was noise.

13 Dr. Schoeffler testified that all of the  
14 software and hardware noise immunity and noise prevention  
15 techniques were either explicitly claimed as such techniques  
16 or were inherently suggestive of those purposes.

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1 Dr. Schoeffler testified that every single  
2 one of the problem-solving aspects of this invention would  
3 have been obvious to a person of ordinary skill in the art  
4 reading the patent. He said, however, that that person of  
5 ordinary skill in the art, having all of those same tech-  
6 niques spread before him, that is being fully knowledgeable  
7 in the relevant art, and addressing the problem addressed by  
8 this patent, would not have found this solution to be obvious.

9 As I understand what Dr. Schoeffler said, it  
10 is that there would be a difference between looking at the  
11 same material in the work shop and reading it in a patent.  
12 I do not accept that testimony. It is to me an absurdity.

13 Plaintiff's own witness, in my view, testi-  
14 fied to facts which if true establish the obviousness of  
15 this combination. And, of course, he got himself into that  
16 fix for a reason we are all familiar with. In order to  
17 support his position that noise immunity techniques were  
18 indeed part of what was being claimed, he had to say that  
19 noise prevention and noise immunity was an obvious, inherent  
20 objective of those devices found in the specifications.

21 But having said that, he then had to explain  
22 why if their noise-solving characteristics were so obvious  
23 in the specifications of the patent, the same techniques  
24 if laid on the work bench would not have been equally  
25 obvious to the person skilled in the art.

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2 To reiterate, the problem that was being  
3 solved was noise. Dr. Schoeffler testified that it would  
4 have been obvious to anyone reading the patent that all of  
5 these things contained in the specifications and in the patent  
6 were solutions to the noise problem. That's what he meant by  
7 saying that these were inherent, that these characteristics  
8 were inherent in these various elements contained in the  
9 drawings and specifications.

10 It simply surpasses my understanding as to  
11 how one can make that contention on the one hand and deny  
12 the corollary that the same information available to the same  
13 person in another place would have led him to the same  
14 conclusion.

15 Now, I take it Dr. Schoeffler's point is that  
16 having all of this information on the work bench isn't the  
17 same thing as putting it together in a combination. You have  
18 to have Frederiksen take all these obvious noise preventing  
19 devices and put them together for you in the patent before you  
20 would understand that that's what these things are for and  
21 this is how they would be combined to achieve the desired  
22 result.

23 It seems to me that this ignores the capa-  
24 bility of our person of ordinary skill in the art. And I  
25 so find.

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2 I asked Dr. Schoeffler, and he was asked by  
3 others, "What was there about this combination that operated  
4 in any unexpected way or did anything that it was not known  
5 to be capable of doing?"

6 There was no answer forthcoming. All we got  
7 was constant repetition of some rote phrases.

8 If anyone in this trial could have put his  
9 finger on some aspect of this combination which was not  
10 obvious to use and which produced results in combination with  
11 the other elements that were unexpected, Dr. Schoeffler was  
12 the person who could have done that. He cannot be faulted  
13 on his knowledge of the relevant art. He cannot be faulted  
14 on his articulateness, the facility of his mind, nor upon his  
15 dedication to the cause of his client, Bally Manufacturing  
16 Company.

17 If we didn't hear from him why this combina-  
18 tion is non-obvious, we can't hear it from anybody. I am  
19 satisfied of that.

20 Mr. Frederiksen, whom I found to be a much  
21 more candid witness than Dr. Schoeffler, did not even attempt  
22 to demonstrate why his invention was non-obvious. It was  
23 interesting to me that that burden was assigned to the  
24 academician and the person who presumably would be best able  
25 to carry it was not asked to do it.

I asked Mr. Englehardt, whom I regarded as a

1 person of ordinary skill in the art, perhaps a little more  
2 than ordinary, and therefore to that extent better able to  
3 answer the question, "What was unexpected about what you  
4 did?" He couldn't tell me. There wasn't anything unexpected.  
5 He didn't get the job done as quickly as he might have liked;  
6 neither did Frederiksen.

7 But it is not my understanding of non-  
8 obviousness that the result must be instantaneous.

9 Now I am going to shift gears and drop the  
10 assumption that all of the problem-solving aspects of the  
11 hardware-software combination are claimed in the patent. And  
12 I am going to look at the question of whether they really are.

13 In this connection, I assume, because there  
14 is no evidence to the contrary, that the program was sent  
15 into the Patent Office at the same time the patent application  
16 was sent.

17 I find nowhere in the patent, either in the  
18 claims or in the drawings or in the specifications, where  
19 the specific program filed with the Patent Office was included  
20 in the patent. And I find nowhere in the patent where it is  
21 indicated that there is any need to include the specific  
22 program in the patent.

23 In the patent itself, in column 3, line 24,  
24 it is stated that the small memory system of the game can be  
25 "readily adapted to a conventional software control of the  
response."

1 In the original file history there is a  
2 declaration by Mr. Frederiksen dated February 12, 1977, where  
3 he states that: "The processor is programmed in a well-known  
4 and standard procedure."

5 Now, this evidence indicates to me that there  
6 was nothing being claimed about this computer program which  
7 was unusual, unconventional, unexpected, or unobvious.

8 It is simply not consistent with the state-  
9 ments I've referred to to suppose that there was anything  
10 about the program that the inventor intended to claim as part  
11 of his invention.

12 Indeed, the game would be run by a micro-  
13 processor and it was necessary to have a computer program  
14 in the machine or it wouldn't work. It would also be  
15 necessary to plug the machine into the wall.

16 I'm not sure that there is any more import-  
17 ance in this patent assigned to the specifics of the program  
18 than there is to the necessity of plugging the machine into  
19 the wall.

20 Both of them are obviously essential to make  
21 the game work.

22 Now, obviously you need a specific program  
23 to make the game work in the manner that Frederiksen intended.  
24 But the point is, he didn't claim that specific program.

25 And I'm arriving at that conclusion even



1 though I concede that he did file the program and that the  
2 patent makes it clear that you need a program.

3 The point again is that nothing specific is  
4 claimed in the patent about the program.

5 It is, to me, not an adequate answer to say  
6 that the Patent Office practice and procedure in those days  
7 did not require that a program be printed.

8 It wouldn't have had to be printed. It could  
9 have been made clear in the claims that the specific program  
10 on file with the Patent Office was a part of those claims.

11 The failure to make that clear, or in fact  
12 even to suggest that possibility, is, to me, absolutely  
13 incompatible with the present claim that the specific program  
14 is part of the claims.

15 I am of course rejecting the testimony of  
16 Dr. Schoeffler. I do so with complete comfort. I found him  
17 to be a biased and partisan witness.

18 By the time he left the stand his objectivity  
19 was about the same as the objectivity one would expect to  
20 find in a lifelong employee of the Bally Manufacturing Company  
21 or the principal shareholder of the Bally Manufacturing  
22 Company.

23 presumably the benefit that one gets by  
24 calling an academic as an expert witness is that those academic  
25 credentials lend credibility to the testimony of the witness.



1 And, indeed they did initially. This man  
2 was eminently qualified to appear as a witness in this case,  
3 was eminent qualified to give me the help I needed ever so  
4 sorely to reach the proper conclusion in this case.

5 But that is not how he perceived his assign-  
6 ment.

7 Now, returning to the question of what is  
8 claimed and whether what is claimed is obvious, we now have  
9 claims which cover totally conventional hardware and an  
10 unspecified but admittedly conventional computer program.

11 The combination of those elements and the  
12 result produced by that combination would, in my view, have  
13 been obvious to a person skilled in the relevant arts, a  
14 person of ordinary skill in the relevant arts.

15 I turn to the secondary considerations,  
16 first the commercial success of the Bally games.

17 At this stage of the trial I am unable to  
18 conclude that the success of the Bally games is attributable  
19 in major part to the Frederiksen patent.

20 I think it's reasonable to conclude that  
21 some part of the success is attributable to the patent, but  
22 what part, is totally problematic, because, as Mr. Katz  
23 indicated in response to a question in closing argument, the  
24 Bally commercial games use the arrangement contained in the  
25 Bracha-Englehardt patent.

Next we have the matter of the Stern license.

I pay very little heed to that particular item of evidence.

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-1LP 1 Stern is a person who was caught red-handed  
2 copying somebody else's patented machine. He threw in the  
3 towel, as well he might have. Anything he was earning was a  
4 windfall. Anything he kept after paying royalties was money  
5 I would think he'd have difficulty sleeping at night over.  
6 So the fact that he didn't fight Bally and instead made his  
7 peace with them and, therefore, cried all the way to the bank  
8 about the royalties he was paying, does not to me demonstrate  
9 the non-obviousness of the Bally patent. And that is not-  
10 withstanding the fact that he had a patent lawyer's advice.  
11 That advice may very well have been predicated in part upon  
12 the rather indefensible position that Stern found himself in  
13 due to his so-called reverse engineering of the Bally  
14 machine.

15 The third item would be the failure by others.  
16 At this stage of the trial, I adopt plaintiff's view of that  
17 situation. I know there is more to be told, but I do not  
18 assume anything about the merits of what I haven't heard;  
19 rather, for purposes of the motion, I assume that the other  
20 machines had failed to solve the problem to the extent that  
21 plaintiff claims they did fail.

22 This, I think, is plaintiff's strongest evi-  
23 dence at this point in the trial. There is no doubt that  
24 failure by others is evidence of non-obviousness. How  
25 persuasive it is as evidence of non-obviousness depends upon

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1 all of the facts and circumstances in the case.

2 One of those circumstances is the length of  
3 time the efforts have been made. And while I haven't tried  
4 many patent cases, it does strike me that in this case, the  
5 trial period is about as short as any I have encountered.

6 This isn't a case where people have been  
7 laboring away for decades or for years even on a full-time  
8 basis in crash programs trying to solve insoluble or appar-  
9 ently insoluble problems.

10 It appears to me that on the basis of plain-  
11 tiff's evidence, there was a lot of activity going on that  
12 was parallel to plaintiff's in substantial part, and that the  
13 failures that were being experienced were by no means indica-  
14 tions that these people were pursuing the wrong route. It  
15 takes a long time to get the bugs out of one of these things.  
16 We know that in Frederiksen's own case. We know it in Engle-  
17 hardt's case. After he reduced his machine to practice, he  
18 said he continued debugging it.

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-1LP 1

2 So, while there is some evidence of failure  
3 by others, it isn't by any means a showing of a hopeless  
4 situation or a showing of total frustration on the part of  
5 all of the others who attempted to solve the problem.

6 There is an argument about the long-standing  
7 recognition of a need, I suppose that's related to the failure  
8 by others, but again, perceived need was not all that long-  
9 standing. I mean the microprocessor became available in 1971  
10 and here we are talking about 1974, 1975. So this can hardly  
11 be regarded as a case in which people have been standing  
12 around for years wringing their hands over the unmet need for  
13 this device.

14 Another aspect of that situation is that  
15 everyone was doing quite well with the electromechanical  
16 machines. The incentive to convert over wasn't the greatest  
17 incentive I have ever heard evidence about. The electro-  
18 mechanical machines were selling well. Bally and all the  
19 other manufacturers were doing well with them.

20 This is not to say that there wasn't a desire  
21 to be first with the electronic machine, I am not minimizing  
22 that incentive, but I don't regard this as a strong case of  
23 a long-standing, unmet need.

24 Another argument is that there was widespread  
25 scepticism in the industry about the possibility of wedding  
a microprocessor to a pinball machine. I find no evidence

-2-2 1 of that in this record. It seems to me that the weight of  
2 the evidence on that preposition is to the contrary; that it  
3 was regarded in the industry as being something that would  
4 inevitably come and something that was entirely feasible.

5 In short, the secondary considerations do not  
6 help the plaintiff. In the absence of evidence that from a  
7 technological standpoint, this combination was non-obvious,  
8 the rather meager and unsatisfactory secondary evidence cannot  
9 rescue this patent.

10 I know there are cases which have said that  
11 an invalid patent cannot be made valid by commercial success.  
12 And I would be running contrary to those cases if I were to  
13 hold that whatever commercial success there may be that could  
14 be attributed to the Frederiksen patent makes that patent  
15 non-obvious.

16 The next subject I would like to address is  
17 the reissue proceeding. I find no help in that proceeding.  
18 It answers none of the questions that I would have hoped to  
19 have answered.

20 Professor Kayton's testimony concerning the  
21 reissue proceedings was of no help to me. To the extent that  
22 his testimony, if credited, might be said to tend toward  
23 validating this patent, I reject that testimony. I found him  
24 to be an extraordinarily biased and partisan witness. Even if  
25 I had not heard that he has been paid some \$200,000 for his

-2-3 1 assistance to Bally in this case, I would have so regarded  
2 him.

3 But it seems to me a minor tragedy of some  
4 sort that two members of eminent university faculties have  
5 seen fit to lend the name of their university and their  
6 academic credentials to the pursuit of private profit, as  
7 has been done in this case.

8 I don't expect experts to come in and testify  
9 for nothing, and there certainly is nothing wrong with the  
10 qualified expert testifying at the behest of one party or  
11 the other to a lawsuit and being paid reasonable compensa-  
12 tion in return for that testimony, or any other assistance  
13 he may render.

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2 But to become in effect a very highly paid  
3 employee of one of the parties, it seems to me, is an alto-  
4 gether different matter.

5 Now, turning to the reissue proceedings them-  
6 selves, I conclude without any doubt whatsoever that the  
7 examiner did not consider this specific computer program  
8 to be a part of the patent being issued and reissued.

9 All of the emphasis on noise immunity and  
10 noise prevention and the unique hardware-software combination  
11 is something new in this trial. It was not argued to the  
12 examiner and, while you can, by poring through the file  
13 history, find references to noise, to regard those as any-  
14 thing remotely resembling the emphasis that has been put on  
15 noise in this trial would be to be utterly misguided.

16 The plaintiff has sought in this trial to  
17 demonstrate the non-obviousness of this patent by recourse  
18 to a theory that was not presented to the patent examiner.  
19 This unique combination of hardware and software simply was  
20 not argued or emphasized to the examiner and, as I say, one  
21 looks in vain for any indication that it was presented at  
22 all.

23 It is simply inconceivable that if Dr.  
24 Schoeffler is correct about the unique combination of  
25 hardware and software being the patented invention, that  
there would not be reference to that unique combination in



-1-2 1 the file history.

2  
3 When we started this trial I presumed the  
4 patent to be valid. But that presumption does not remain  
5 with the plaintiff beyond the point of reason.

6 The presumption of innocence in a criminal  
7 trial remains with the defendant only until the evidence  
8 proves his guilt beyond a reasonable doubt.

9 The presumption of validity in this case  
10 has been wholly dissipated by the evidence which has been  
11 presented during the plaintiff's case.

12 Whatever vitality the re-issue proceeding  
13 would inject into the presumption of validity is wholly  
14 dissipated by my finding that the examiner simply did not  
15 understand this case to be the case that the plaintiff has  
16 presented in this courtroom.

17 I agree with defendants that the file history  
18 indicates the examiner regarded the invention as being  
19 the development of a workable electronic pinball game. He  
20 was undoubtedly aware that there were noise problems that  
21 had to be overcome in order for the game to work.

22 But he was not aware of this specific array  
23 of software techniques now claimed by plaintiff to be a part  
24 of the invention. Nor was he aware that plaintiff was  
25 making the extravagant claim that any software techniques  
that worked to reduce or prevent noise were being claimed.

-1-3 1 The evidence clearly and convincingly es-  
2 tablishes that the invention of Frederiksen and Nutting was,  
3 at the time I assume it was reduced to practice on September  
4 26, 1974, obvious as a whole to a person of ordinary skill  
5 in the relevant arts.

6 In short, I hold that the combination claimed  
7 in the patent and the result of that combination were obvious. .  
8 It was a combination of old elements which  
9 yielded good but unsurprising results. The combination did  
10 exactly what it would have been expected to do by a person  
11 of ordinary skill in the art.

12 The microprocessor era opened up a wide range  
13 of possibilities. I have no idea who invented the micro-  
14 processor or who very deservedly became wealthy as a result  
15 of that invention.

16 That, in my view, is the person who should  
17 be taking bows in this case, because all that is involved in  
18 this case is relatively routine application of the micro-  
19 processor art in combination with the obvious needs of a  
20 pinball game.

1  
2 Now, I turn to the second general subject of  
3 my ruling, and that is the question of whether the claims of  
4 this patent are invalid under Section 112 for failure to  
5 distinctly claim the invention and for failure sufficiently  
6 to describe the invention.

7 The answer to that question should by now be  
8 obvious to a lawyer of ordinary skill in the art. The  
9 software is not distinctly claimed. The software is said to  
10 be an essential part of the invention. Nowhere in the patent  
11 is the software claimed to be part of the invention, let  
12 alone is any specific software claimed.

13 On Dr. Schoeffler's own testimony, this  
14 patent failed to distinctly claim, shall we say, one-half of  
15 the invention. If we say the software is one-half of it and  
16 the hardware is the other half, just to make an arbitrary  
17 division, there has been a failure to distinctly claim one-  
18 half of the invention.

19 By the same token, there has been a failure  
20 to describe that part of the invention.

21 One cannot even read this patent and tell  
22 that the software is claimed, let alone can one read it and  
23 tell what software is claimed. You cannot tell what it is  
24 or how it interacts with the hardware. And the essence of  
25 the invention, according to the plaintiff, is that very  
interaction.

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1 The essence of this invention is not the  
2 various hardware that is referred to specifically in the  
3 claims, or indeed the hardware that is so painstakingly  
4 portrayed in the drawings. The essence of the invention,  
5 as I understand the testimony of Dr. Schoeffler, is the  
6 interaction of that hardware with something whose descrip-  
7 tion and whose very existence is ignored in the claims and  
8 by the patent as a whole.

9 In this connection I would note that the  
10 patent claims as construed by Dr. Schoeffler are simply too  
11 broad; because he was unable to specify what there was about  
12 this invention that was patentable, he was forced into the  
13 position of saying that anything that met what he said was  
14 the intent of the patent was covered by the claims.

15 His testimony reminded me a little bit of  
16 the play that is sometimes called by the quarterback on the  
17 last play of the game when his team is behind by a touch-  
18 down; you throw what in some quarters is known as a Hail  
19 Mary pass and there are three things that can happen:  
20 it can drop into the end zone, uncaught by anybody, or it  
21 can be caught by one of your opponents, and neither of those  
22 results is good; but the third possibility is that the ball  
23 will be caught by a pair of friendly hands, in which case  
24 you win the game.

25 And it seems to me that the claim in this

1 case, or in this trial, that any software that works is  
2 part of the patent, is very similar to a Hail Mary pass.  
3 You throw it up and hope that some friendly hand will catch  
4 it.

5 Because it is not possible to infringe an  
6 invalid patent, we need not reach the question of infringe-  
7 ment in this trial.

8 On the question of whether Rockwell is guilty  
9 of contributory infringement, the motion of the defendant  
10 for a Rule 41(b) judgment is denied. That infringement  
11 issue, like the other infringement issues, would require  
12 further evidence.

13 However, defendants' motions based upon  
14 nonobviousness -- excuse me -- based upon obviousness of  
15 the patent in suit and upon failure to comply with Section  
16 112 are allowed. Judgment is entered in favor of the  
17 defendants.

18 Is there anything else we should address at  
19 this time?

20 MR. GOLDENBERG: Not at this time, your Honor.  
21 I am questioning whether we should -- would the Court be  
22 interested in having a rather simple set of findings or  
23 something?

24 THE COURT: I think that would be a good idea.  
25 Why don't you have what I have said transcribed and attach

1 MR. GOLDENBERG: Thank you very much, your  
2 Honor, for your attention.

3 (Whereupon an adjournment was taken herein at 7:00 p.m.)  
4

5 I certify that the foregoing is a correct transcript  
6 from the record of proceedings in the above-entitled matter.  
7

8 Laura M. Brennan  
9 Laura M. Brennan

10-31-84  
Date

3-1-4 1 it to an order that you might prepare, a judgment order  
2 that you might prepare, and you can include in the judgment  
3 order anything that occurs to you that is consistent with  
4 what I have said and which is an appropriate part of the  
5 order. And, of course, I will hear from the plaintiff  
6 as to the form of the order.

7 MR. GOLDENBERG: All right, your Honor.

8 Your Honor, and I understand we won't be  
9 here tomorrow and you are going to be away next week. May  
10 we have -- and we are all a bit fatigued, --

11 THE COURT: Yes, there is no hurry as far as  
12 I am concerned.

13 MR. GOLDENBERG: May we have a bit of time  
14 to do that?

15 THE COURT: Surely. In fact, if you'd like,  
16 I won't even set a time. You can come in any time you want.

17 MR. GOLDENBERG: We won't let it rest too  
18 long.

19 MR. TONE: I take it then the judgment is  
20 not entered as of today, but will be entered --

21 THE COURT: I will enter it as of the sub-  
22 mission of a formal, written order.

23 MR. TONE: Very well.

24 THE COURT: All right.

25 MR. LYNCH: Thank you, your Honor.